2012 Environmental Consultations in Regional Transportation Planning

OKI’s Consultations Process and Discussion with State and Local Agencies
Environmental Consultations in Regional Transportation Planning

OKI’s Consultations Process and Discussion with State and Local Agencies in 2012

August, 2012

The preparation of this document was financed cooperatively by the Federal Highway Administration, the Federal Transit Administration, the Commonwealth of Kentucky Transportation Cabinet, the Ohio Department of Transportation, the Indiana Department of Transportation, and the units of local and county government in the OKI Region. The opinions, findings, and conclusions expressed in this document are those of the OKI Regional Council of Governments and are not necessarily those of the U.S. Department of Transportation. This report does not constitute a standard, specification, or regulation.
Acknowledgements

We would like to express our appreciation to those who participated in OKI’s environmental consultations and provided the insights and suggestions presented in this report.

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Dearborn County Soil and Water Conservation District
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    Duane Drockelman, South Lafargery Creek Resource Coordinator

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Table of Contents

Chapter 1  Introduction

Consultations in Transportation Planning  Page 1
OKI’s 2012 Consultations Process  Page 2

Chapter 2  Environmental Resources: The Focus of Consultations

Regionally Significant Environmental Resources  Page 5
  Table 1. Regionally Significant Environmental Resources  Page 5
Perspective on Local Environmental Resources  Page 7
  Selected Regionally Significant Environmental Resources  Page 8
  Types of Environmental Resources  Page 8
The Major Environmental Concerns  Page 9
Project-Level Comments on Environmental Impacts  Page 9
  Table 2. Comments on Individual Transportation Projects  Page 10

Chapter 3  Effectiveness of Environmental Protection Strategies: Perspectives From Consultations

The Feasibility of Addressing Major Environmental Concerns  Page 15
Perspectives on State Environmental Protection Programs  Page 17
  Federally-Based State Programs  Page 18
  Ohio Programs  Page 19
  Kentucky Programs  Page 19
  Indiana Programs  Page 19
Comments on Local Environmental Protection Strategies  Page 19

Chapter 4  Improving Environmental Protection: Suggestions From Consultations

Impediments to More Effective Environmental Protection  Page 23
Suggestions for Local Environmental Protection Strategies  Page 24
Suggestions for Improving Transportation  Page 25
  Transportation Policies and Practices  Page 25
  Types of Project Impacts  Page 26
  Optimizing Project Benefits  Page 27
Suggestions for Regional-Level Support of Environmental Protection  Page 28

Appendices
Appendices

Appendix A. Scripts per State Session
Ohio Script for March 8, 2012 Session
Kentucky Script for March 13, 2012 Session
Indiana Script for March 5, 2012 Session

Appendix B. Data on Regionally Significant Environmental Resources
Map of Regionally Significant Environmental Resources in the OKI Region
Table of State-Conserved Areas
Table of Regionally Significant Streams
Table of Endangered, Threatened, and Rare Species by County
Map of Prime and Important Farmland and Agricultural Districts in the OKI Region

Appendix C. Data on Transportation Improvements in OKI 2040 Plan
Ohio Transportation Improvements
Kentucky Transportation Improvements
Indiana Transportation Improvements

Appendix D. Consultation Comments and Background Information
1. Excerpt from OKI’s Report on Previous Consultations
2. Consultation Comments on Selected Regionally Significant Environmental Resources
3. Consultation Comments on Types of Local Resources
4. The Feasibility of Addressing Major Environmental Concerns
5. Consultation Comments on the Effectiveness of Federally-Based State Environmental Protection Programs
6. Consultation Comments on the Effectiveness of Ohio Environmental Protection Programs
7. Consultation Comments on the Effectiveness of Kentucky Environmental Protection Programs
8. Consultation Comments on the Effectiveness of Indiana Environmental Protection Programs
9. Consultation Comments on the Effectiveness of Local Environmental Protection Strategies
10. Consultation Comments on Impediments to More Effective Environmental Protection
11. Consultation Comments on Suggestions for Local Environmental Protection Strategies
12. Consultation Comments on Suggestions for Transportation Policies and Practices
13. Types of Project Impacts: Concerns and Suggestions
14. Suggestions for Using Transportation Projects for Environmental and Community Benefits
15. Consultation Comments on Suggestions for Regional-Level Support of Environmental Protection
Chapter 1

Introduction

In March 2012, OKI conducted three separate environmental consultations with agencies in Ohio, Kentucky, and Indiana. This chapter focuses on the consultations’ purpose and OKI’s consultations process. The remainder of the report summarizes information considered during the 2012 consultations, the highlights of discussion, and participants’ suggestions for reducing transportation impacts on environmental resources.

Consultations are a process for considering the transportation’s plan’s environmental effects so that costly impacts might be avoided. OKI’s 2012 consultations focus on the 2040 regional transportation plan’s potential environmental effects and options for avoiding effects that were identified as Major Environmental Concerns in OKI’s previous consultations. (The previous consultations are described in Results of State-Agency Consultations Conducted...in 2009 and ...OKI’s Consultations Process and Discussion with Local Agencies in 2010-2011.)

Participants in OKI consultations represented forty-seven state and local agencies involved in conserving or protecting environmental resources. Sixty individuals provided perspective on transportation projects, impacts, and opportunities that were used to inform preparation of the OKI 2040 Regional Transportation Plan adopted in June 2012 (Chapters 4, 16, and Appendix G). Additional perspective provided in this report can help inform the development of more effective state and local strategies for reducing environmental impacts and costs through planning, programs, and practices related to transportation and development.

Consultations in Transportation Planning

Federal requirements call for metropolitan planning organizations like OKI to conduct environmental consultations as part of their updates of regional long-range transportation plans. The consultations bring state and local agencies with environmental expertise more directly into the plan’s development. The consultations process includes a comparison of the draft transportation plan with environmental resources targeted for conservation or protection by state agencies as a means of improving decisions for transportation and development.

Consultations have been integrated into transportation planning as a strategy to advance sustainable development and reduce the need for public expenditures related to environmental impacts. More specifically, consultations provide opportunity to consider:

▪ the extent and vulnerability of the region’s least impaired environmental resources,
▪ the potential environmental effects of transportation improvements from both project-level and larger, cumulative perspectives,
▪ options for avoiding transportation project impacts that could result in mitigation and higher costs, and
▪ options for reducing adverse impacts from conventional development trends and practices.
OKI's 2012 Consultations Process

In OKI's 2012 consultations, state and local agencies came together in state-based sessions to consider the potential effects of transportation improvements on environmental resources. Effects were considered at both regional and project level scales. Consideration was given to the cumulative and development-related effects of transportation improvements in addition to direct project impacts.

The consultations process involved both a map-based comparison of the OKI Regional Transportation Plan with Regionally Significant Environmental Resources and a series of discussions guided by questions. The map-based comparison provided for a review and comment of individual projects in the draft 2040 transportation plan. The discussions focused on strategies for avoiding the regional and cumulative impacts of transportation improvements and related development.

Participants in the OKI 2012 consultations were from nineteen state agencies and twenty-eight local agencies. State participants provided perspective based on agency responsibilities for conserving or protecting environmental resources (nine Ohio agencies, five Kentucky agencies, five Indiana agencies). Local participants were from mostly county-level agencies involved in land use planning, stormwater management, soil and water conservation, parks, or water resources (eighteen Ohio agencies, seven Kentucky agencies, three Indiana agencies).

Sessions began with presentations of background information relevant for the subsequent map-based comparison and discussions. Sessions were tailored per state but followed the same five-part format. Appendix A contains the script used for each state session, inclusive of information presented, state agency presenters and topics, and questions that guided discussion.

- Initial presentations featured the Regionally Significant Environmental Resources relevant for comparison with the transportation plan. Information about these resources had been updated since the previous consultations and expanded to include prime farmland and Ohio and Kentucky Agricultural Districts. Chapter 2 includes descriptions of these resources, references to maps and tables used, and summaries of discussion comments.

- A presentation unique to each session followed, which described conditions of some highly-valued aquatic resources in each state portion of the region. Chapter 2 includes summaries of these presentations and discussion comments.

- Also unique per session, state agencies provided briefings on some major programs for protecting Regionally Significant Environmental Resources. Briefings were followed by discussion of how local agencies could influence or use these programs to better protect local resources. Ohio briefings featured the Integrated Report, Assessment Categories, and Antidegradation Policy. Kentucky briefings featured the Integrated Report, Classifications of Water Bodies, and the Comprehensive Wildlife Conservation Strategy. Indiana briefings

- Following the presentations, participants discussed strategies for avoiding impacts considered to be Major Environmental Concerns. Discussion was guided by a standard set of six questions. Chapter 2 provides an explanation of the Major Environmental Concerns. Based on this and previous discussion, Chapter 3 summarizes perspectives on the feasibility of addressing the Major Environmental Concerns and the effectiveness of state programs and local strategies for environmental protection. Chapter 4 presents participants’ suggestions for developing more effective environmental protection strategies related to improving transportation, local strategies, and regional-level support.

- The final discussion was a project-level review of the draft transportation plan that provided comments on scheduled and proposed expansion projects for their environmental effects or restoration opportunities. Appendix B contains the maps and Appendix C contains the project lists used for this comparison. Chapter 2 includes comments on individual projects in the section on Project-level Impacts. Chapter 4 presents more general comments in the section on Suggestions for Improving Transportation.

Following the consultations and prior to the plan’s adoption, OKI made information from the consultations available to its committee members and the public. OKI’s Board and Intermodal Coordinating Committee were given presentations in April that featured highlights from the consultation discussions. Public open houses in each of OKI’s eight counties during April 2012 shared information from the project-level review (2040 OKI Regional Transportation Plan, Appendix G).

This report provides the consultation results. It summarizes discussion of how numerous state and local programs and practices for improving transportation, guiding development, managing stormwater, and conserving or protecting environmental resources are perceived for their effect on environmental resources and their potential for better resource protection. The report’s appendices include the comments that are the basis for its summary statements.

The immediate outcomes of the consultations are the observations and suggestions contained in this report, but the most meaningful outcomes will be actions taken at state and local levels in response to the insights provided. Those actions will affect the future condition of Regionally Significant Environmental Resources and the need for expenditures resulting from resource impairments.
Chapter 2

Environmental Resources: The Focus of Consultations

The Regionally Significant Environmental Resources and the Major Environmental Concerns identified in the previous round of consultations remained the focus in the 2012 consultations. In OKI’s process, the consideration of environmental resources is both for Regionally Significant Environmental Resources, which are resources identified by the states for conservation or protection, and for environmental impacts defined as Major Environmental Concerns.

This chapter provides information on the Regionally Significant Environmental Resources identified for comparison with the transportation plan, the Major Environmental Concerns that were the basis for discussing strategies for avoiding environmental impacts from the transportation plan (transportation improvements and related development), and the results of the project-level review of the transportation plan’s potential environmental effects.

Regionally Significant Environmental Resources

The environmental resources identified in previous consultations and used for comparison with the transportation plan in the 2012 consultations are called Regionally Significant Environmental Resources. These are mostly high quality or rare resources – or help to sustain other high-quality or rare resources – that are identified in state conservation plans, maps, or inventories. They warrant conservation or protection because of state investments, regulations, or policies. The environmental and economic value of these resources and their functions are the basis for their selection as resources that the states conserve or protect. Impacts to these resources can require mitigation and substantially increase costs.

For the 2012 consultations, OKI defined five categories of Regionally Significant Environmental Resources, as listed in Table 1:

- State Conserved Areas,
- Regionally Significant Streams,
- Wetlands,
- Endangered, Threatened, and Rare Species, and
- Prime and Important Farmland and Agricultural Districts.

<table>
<thead>
<tr>
<th>Category</th>
<th>Description (OKI 2012 Environmental Consultations)</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Conserved Areas</td>
<td>State parks, state wildlife areas (Ohio) and wildlife management areas (Kentucky), and state preserves (preserves are established under state law)</td>
</tr>
<tr>
<td></td>
<td>• Areas where state investments conserve environmental resources</td>
</tr>
<tr>
<td>Category</td>
<td>Description (OKI 2012 Environmental Consultations)</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------------------------------------</td>
</tr>
</tbody>
</table>
| **Regionally Significant Streams** | High quality streams or stream segments identified for conservation or protection by the states based on one or more of the following:  
- 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)  
- Identified as a priority area for conserving aquatic species (by the state wildlife conservation plan)  
- 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)  
- Reported as supporting its designated use for aquatic habitat (by the 2010 state Integrated Report)  
- Classified for high ecological value (in state Antidegradation Policy included in water quality standards in state code) |
| **Wetlands** | 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)  
- Includes the Oxbow of the Great Miami River (habitat important for rare species and migration) |
| **Endangered, Threatened, and Rare Species** | 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 forseeable future), or at risk  
- 165 species native to the OKI Region are state listed.  
- 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.  
- The survival of listed species depends partly on Regionally Significant Streams, State Conserved Area, and Wetlands. |
| **Prime and Important Farmland and Agricultural Districts** | Areas where transportation projects may involve additional costs if they reduce the land’s use or suitability as farmland  
- Prime Farmland has soil characteristics that make it the world’s most productive agricultural land and a globally-scarce resource.  
- Impacts to Prime and Important Farmland from federally-funded projects are to be avoided or mitigated under federal policy.  
- 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. |
Information about the resources within these categories was presented during each session. Information presented was differentiated for each session to identify local Regionally Significant Streams and the state-specific criteria used to select them. Appendix A contains scripts for state sessions that include information on Regionally Significant Environmental Resources.

Data on Regionally Significant Environmental Resources is featured in maps and tables, which are contained in Appendix B:

- Map of Regionally Significant Environmental Resources in the OKI Region,
- Table of State-Conserved Areas,
- Table of Regionally Significant Streams,
- Table of Endangered, Threatened and Rare Species by County, and
- Map of Prime and Important Farmland and Agricultural Districts in the OKI Region.

Some Regionally Significant Environmental Resources were featured in presentations. Presentations per session are listed below.

Ohio: Significant Stream Resources in the OKI Region (by the Scenic Rivers Program Manager with the Ohio Department of Natural Resources) featured unique qualities of the Whitewater, Great Miami, and Little Miami Rivers and the East Fork of the Little Miami River; the protections provided and not provided by Scenic River designation; direct and indirect impacts of transportation projects; and project design and planning considerations for reducing transportation project impacts.

Kentucky: The Licking River: Protecting a Valuable Resource (by an Environmental Technologist with the Watershed Management Branch of the Kentucky Division of Water) featured the Licking River and high quality Licking and Ohio River tributaries in the OKI Region; how land activities can degrade these water resources; restoration costs; and tools and resources for protection.

Indiana: Additional Perspective on The Whitewater River, Laughery Creek, and The Oxbow (by OKI staff) differed from the other state sessions in that OKI presented information on these resources as a basis for better understanding their conditions and state and local agency concerns. The presentations were followed by discussion guided by questions: How well have Laughery Creek and the Whitewater River maintained their environmental qualities? Could Dearborn County have more rare species than data indicates? How should the Oxbow be protected from development impacts? How can the Oxbow benefit from mitigation?

**Perspective on Local Environmental Resources**

Consultation comments and presentations provided perspective on local environmental resources’ conditions and their conservation needs and opportunities. Perspectives are summarized below for six of the Regionally Significant Environmental Resources featured in presentations and for types of environmental resources for which information was provided during discussions.
Selected Regionally Significant Environmental Resources (Appendix D-2)

The Great Miami River warrants greater protection in response to local interest in its conservation.

The Little Miami River’s environmental value and economic benefits are jeopardized by the continued growth of impervious surface.

Laughery Creek’s slopes are valuable for forest cover and reforestation potential, and its waters provide good aquatic habitat upstream of the impounded area.

The Licking River’s water quality warrants protection from activities that would contribute to future need for restoration.

The Oxbow’s vulnerability to the development impacts of increased runoff may be best offset by a buffer.

The Whitewater River is distinguished in both Indiana and Ohio for its quality and recreational use.

Types of Environmental Resources (Appendix D-3)

Floodplains   The cumulative effect of state-level approvals of project development and cut-and-fill practices in floodways has increased flooding and reduced floodplain area in Dearborn County.

Headwater Streams   In developed areas, the elimination of headwater streams has caused stormwater problems and habitat loss; developing areas could protect headwater streams and realize the benefits.

Potential targets for conservation   State agencies want to support conservation for areas that are locally-selected; good conservation targets include areas that have already received public funding, such as mitigation project areas and watersheds with “319” planning grants.

Rare Species   Rare species may be more prevalent in Dearborn County than data indicates.

Riparian Corridors   Riparian corridors are good targets for conservation efforts.

Trees and Forested Areas   Tree loss will be increasing from the effects of invasive plants and insects – in conjunction with environmental, financial, and visual impacts – and from the effects of soil compaction and topsoil removal in the development process.
The Major Environmental Concerns

Consultations included discussion of strategies for avoiding environmental impacts. Discussion was guided by questions focusing on five Major Environmental Concerns about environmental impacts that had been identified in the previous round of consultations, which were to:

- retain forested tracts,
- conserve stream corridors (maintain corridor connectivity),
- divert roadway runoff from direct entry into streams,
- protect streams not yet degraded, and
- constrain the growth of impervious surface.

The discussion from the previous consultation round indicated that, in general, local processes for guiding development and managing stormwater:

- are not used to conserve forested area,
- commonly allow streams to be infilled or piped,
- commonly use curb-and-gutter systems that discharge roadway runoff directly to streams,
- do not differentiate for stream conditions, and
- are not effective for reducing roadway width, parking lot size and other impervious surfaces.

To advance consideration of options and more effective strategies for addressing the Major Environmental Concerns, the following questions were posed to the participating state and local agencies in 2012:

- Which of the five concerns would be most feasible to achieve?
- What strategies offer the greatest potential to address these concerns?
- How can harmful practices be reduced?
- What state-level initiatives could facilitate change in local strategies or increase use of effective strategies?
- How could OKI better support local efforts to conserve or protect environmental resources?
- What other concerns should be added? Do you have additional comments on strategies for avoiding environmental impacts?

Appendix D-1 provides additional information about the Major Environmental Concerns that was provided to participants in the 2102 consultations. The discussion related to these concerns is summarized in parts of Chapters 3 and 4.

Project-Level Comments on Environmental Impacts

The project-level comparison of transportation projects and environmental resources identified concerns and opportunities for protecting environmental resources. The comparison involved considering transportation projects in the draft 2040 regional transportation plan for their potential environmental effects, which could be negative or positive. Discussion was framed by inquiries about project environmental effects or impacts, suggestions for how impacts could be avoided, and opportunities for enhancing or restoring environmental resources and by open discussion.
Table 2 presents comments on individual projects provided in the consultations. These comments, along with more general comments on types of projects and on opportunities for project benefits (see Chapter 4 section on Suggestions for Improving Transportation), were provided at the OKI open house for public comment prior to the plan’s adoption.

**Table 2. Comments on Individual Transportation Projects**

(OKI 2012 Environmental Consultations on the draft 2040 regional transportation plan)

### BUTLER COUNTY

<table>
<thead>
<tr>
<th>ID</th>
<th>Type</th>
<th>Facility</th>
<th>Origin</th>
<th>Destination</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>20499</td>
<td>TIP</td>
<td>SR 63 Extension</td>
<td>US 127 Eastward at SR 4</td>
<td>New 2-lane facility</td>
<td>Locals don't want this project constructed.</td>
</tr>
<tr>
<td>80516</td>
<td>TIP</td>
<td>Oxford Connector</td>
<td>From US 27 to SR 73</td>
<td>Construct a new two-lane connector road (toll credits)</td>
<td>The Great Miami River Area and area overlying the aquifer (above brewery) to be crossed by this project need to be protected from road salt and other contaminants.</td>
</tr>
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</table>

### BUTLER AND WARREN COUNTIES

<table>
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<th>ID</th>
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<th>Facility</th>
<th>Origin</th>
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<tbody>
<tr>
<td>402</td>
<td>Recommended</td>
<td>Butler-Warren Rd</td>
<td>Fields-Ertel to US 42</td>
<td>Widen to 3 Lanes</td>
<td>Right-of-way should be expanded if possible for addition of green infrastructure to manage stormwater (and potential to add side-walks/complete streets).</td>
</tr>
<tr>
<td>403</td>
<td>Recommended</td>
<td>Butler-Warren Rd</td>
<td>US 42 to Tylersville Rd.</td>
<td>Widen to 3 lanes</td>
<td>Right-of-way should be expanded if possible for addition of green infrastructure to manage stormwater (and potential to add side-walks/complete streets).</td>
</tr>
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### CLERMONT COUNTY

<table>
<thead>
<tr>
<th>ID</th>
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<th>Facility</th>
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<tr>
<td>82581</td>
<td>TIP</td>
<td>Amelia-Olive Br. Relocation</td>
<td>Clough Pike to Olive Branch-Stonelick Rd. at SR 32</td>
<td>New 3-lane connector and ramp improvements</td>
<td>Project should be aligned and designed to minimize impacts on Shayler Run (alignment appears to include two stream crossings). Additional concern is that project will contribute to loss of greenspace in Union and Batavia Townships.</td>
</tr>
<tr>
<td>82586</td>
<td>TIP</td>
<td>SR 32-Frontage Road</td>
<td>Bauer Rd. to Half Acre Rd.</td>
<td>New three-lane frontage road with additional turn lanes at major intersections.</td>
<td>Project should be designed to protect Slabcamp Run, including design of crossing to protect the stream and avoiding placement of streams in culverts.</td>
</tr>
</tbody>
</table>
### Table 2. (continued)

**CLERMONT AND HAMILTON COUNTIES**

<table>
<thead>
<tr>
<th>Project ID</th>
<th>Recommended</th>
<th>Facility Type</th>
<th>Facility Name</th>
<th>Mileage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>330</td>
<td>Recommended</td>
<td>New roadway facility</td>
<td>NEW Eastern Crd. Relocated SR32</td>
<td>US 50 to Eight Mile Rd</td>
<td>TRAC TIER 3; PID: 86462; Relocated and construction for controlled access, new 4-lane, multimodal arterial facility with river crossing west of IR 275. The new bridge should be designed to avoid adverse impacts to the Little Miami River and corridor. The mitigation agreement that has been negotiated should be adhered to, but roadside areas should be planted as forest instead of sod (involves revision of agreement).</td>
</tr>
</tbody>
</table>

**HAMILTON COUNTY**

<table>
<thead>
<tr>
<th>Project ID</th>
<th>TIP Type</th>
<th>Facility Type</th>
<th>Facility Name</th>
<th>Mileage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>76257</td>
<td>TIP</td>
<td>Adding lanes</td>
<td>IR 75</td>
<td>From 0.1 mile N of Harrison Ave. to 0.1 miles S of Paddock Rd.</td>
<td>Major rehabilitation of pavement. Phase 4 of IR 75 corridor projects. PE for phases 1-7</td>
</tr>
<tr>
<td>77889</td>
<td>TIP</td>
<td>Adding lanes</td>
<td>IR 75</td>
<td>From south of SR 562 to north of SR 4</td>
<td>Widen for additional through lanes, reconstruct interchanges as needed (phase 8)</td>
</tr>
<tr>
<td>82286</td>
<td>TIP</td>
<td>Adding lanes</td>
<td>IR 75</td>
<td>0.4 miles N of Mitchell Ave to 0.2 miles N of SR 562</td>
<td>Reconstruct IR 75 from north of Mitchell interchange through SR 562 interchange. (Phase 7)</td>
</tr>
<tr>
<td>303</td>
<td>Recommended</td>
<td>Major reconstruction/interchange improvements</td>
<td>Mill Creek Expressway Phase 4</td>
<td>IR-75 - 2.30</td>
<td>TRAC TIER 1; PID: 76257; Study the corridor for access improvements including interchanges at Hopple St., IR 74 and Mitchell Ave. …Work includes bridge work, and other work determined by the study phase.</td>
</tr>
<tr>
<td>307</td>
<td>Recommended</td>
<td>Adding lanes</td>
<td>Mill Creek Expressway Phase 8</td>
<td>IR-75 - 7.85</td>
<td>TRAC TIER 3; PID: 77889; Project will widen for additional through lanes, rehabilitate existing pavement and bridges. Reconstruct SR 562 interchange, remove the Towne Ave. interchange, complete minor improvements to the Paddock Road interchange, and tie into the existing SR 126 interchange southern ramps. Project extends from SR 562 to SR 126/Galbraith Rd. area.</td>
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</tbody>
</table>

Area affected by I-75 widening between I-74 and Carthage should be re-forested.

Projects in area served by the combined sewer system:
Roadway runoff should be directed or re-directed to storm sewers or to streams (after pre-treatment)
Table 2. (continued)

<table>
<thead>
<tr>
<th>WARREN COUNTY</th>
<th>TIP</th>
<th>traffic operations</th>
<th>SR 122</th>
<th>.12 miles west of SR123 west junction to .12 miles east of SR 741</th>
<th>Add left turn lanes on all approaches at both SR122/Sr123. Improve 5-leg intersection.</th>
</tr>
</thead>
<tbody>
<tr>
<td>76374*</td>
<td>TIP</td>
<td>new roadway facility</td>
<td>SR 123/SR 63 Connector</td>
<td>SR 123 to SR 63 west of Lebanon</td>
<td>New connector road. The impacts of this project's future extension to the interstate would be of greater concern than the current project. Consider option to build a loop trail to connect with Armco Park/Shaker Creek.</td>
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<tr>
<td>Existing swales should be retained. Shaker Creek headwaters should be protected.</td>
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<tr>
<td>85320</td>
<td>TIP</td>
<td>new roadway facility</td>
<td>SR 123/SR 63 Connector</td>
<td>SR 123 to SR 63 west of Lebanon</td>
<td>New connector road. The impacts of this project's future extension to the interstate would be of greater concern than the current project. Consider option to build a loop trail to connect with Armco Park/Shaker Creek.</td>
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<tr>
<td>Existing basins along Bethany Road should be used to manage runoff. The project should be considered for potential addition of a trail.</td>
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<tr>
<td>401</td>
<td>Recommended</td>
<td>adding lanes</td>
<td>NEW Bethany Rd</td>
<td>West Mason Corp. Limit to Mason-Morrow-Millgrove Rd.</td>
<td>Widen to 5 lanes and connect Bethany and Mason-Morrow-Millgrove</td>
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<tr>
<td>Right-of-way should be expanded if possible for addition of green infrastructure to manage stormwater (and potential to add side-walks/complete streets).</td>
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<tr>
<td>405</td>
<td>Recommended</td>
<td>adding lanes</td>
<td>Mason Montgomery Rd</td>
<td>Fields Ertel to Socialville Fosters Road</td>
<td>Widen one lane in each direction</td>
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<tr>
<td>CAMBPELL COUNTY</td>
<td>Recommended</td>
<td>new roadway facility</td>
<td>NEW KY 536</td>
<td>US 27 to AA Highway (KY 9)</td>
<td>6-352.00 Extension of existing roadway. 3.50 miles in length. The crossing should be designed to protect Brush Creek (classified by OKI as a Regionally Significant Stream; tributary to Twelvemile Creek which is also classified by OKI as a Regionally Significant Stream). Project impacts on Agricultural Districts are a concern.</td>
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<tr>
<td>CAMBPELL AND KENTON COUNTIES</td>
<td>Recommended</td>
<td>new roadway facility</td>
<td>NEW KY 1998 ALSO KENTON CO.</td>
<td>KY 177 to KY 9</td>
<td>New bridge and approach Road to provide access from AA Highway near KY 1998 to KY 177. The new Licking River crossing is of concern for impacts to the river from the bridge and new facility and from the effects of additional development (the Licking River is classified by OKI as a Regionally Significant Stream).</td>
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<tr>
<td>KENTON COUNTY</td>
<td>Recommended</td>
<td>major reconstruction</td>
<td>KY 8</td>
<td>4th Street Bridge over Licking River</td>
<td>Replace the 4th Street Bridge with the same number of vehicular lanes with additional accomodations for pedestrians and cyclists. Concern is for the crossing's effects on the Licking River (effects of runoff from the bridge and of bridge construction; the Licking River is classified by OKI as a Regionally Significant Stream).</td>
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</table>
### DEARBORN COUNTY

<table>
<thead>
<tr>
<th>Project</th>
<th>Recommended</th>
<th>Adding Lanes</th>
<th>Facility</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>801</td>
<td>Realigned and widened by adding a lane each direction</td>
<td>SR 1</td>
<td>US 50 to Nowlin Av. and SR 1 intersection</td>
<td>Runoff should be managed to avoid impacts to the Oxbow or increased flooding in the Bellview Road area. Fill should be kept out of the floodway. If feasible, the project should be kept out of the floodway.</td>
</tr>
<tr>
<td>803</td>
<td>Recommended new roadway facility</td>
<td>NEW Bright to I-74 Connector</td>
<td>North Dearborn Rd. to I-74</td>
<td>Concern is for the effects of a new roadway over the Whitewater River (for impacts from the bridge and new facility and the effects of additional development; the Whitewater River is classified by OKI as a Regionally Significant Stream).</td>
</tr>
<tr>
<td>806</td>
<td>Recommended adding lanes</td>
<td>SR 350</td>
<td>North Hogan to US 50</td>
<td>Runoff should be captured and managed to avoid impacts on North Hogan Creek.</td>
</tr>
</tbody>
</table>

* Project is not included on consultations map or table because it does not expand capacity.
Chapter 3
Effectiveness of Environmental Protection Strategies: Perspectives from Consultations

State and local environmental protection programs were discussed during the consultations. Participants considered how local agencies might use or influence the programs featured in state agency presentations. They further considered state and local programs in response to questions about how to better address the Major Environmental Concerns. These discussions referred to numerous state programs and local strategies for protecting environmental resources and avoiding impacts and included comments on their effectiveness.

This chapter provides perspective on what strategies work best or have potential for protecting environmental resources and avoiding impacts. The chapter begins with a focus on the strategies for addressing the Major Environmental Concerns. The remainder of the chapter indicates the effectiveness of some major state programs and local strategies for protecting environmental resources.

The Feasibility of Addressing Major Environmental Concerns

The summary below is based on discussion related to or in direct response to the question: “If you were to focus on one of the Major Environmental Concerns as the goal most feasible to achieve – which would it be?”

Discussion is summarized individually for each of the five Major Environmental Concerns and indicates that, overall,

▪ all of the Major Environmental Concerns can be addressed to some degree and
▪ no concern is widely viewed as “most feasible” to address.

The comments on which this summary is based are included in a full version in Appendix D-4.

Retain Forested Tracts. The feasibility of retaining forested tracts is greatest in areas least suited for development; tree and forest retention is hindered by public policy and public understanding, maintenance and development practices, and invasive plants and insect infestations.

The feasibility of retaining forested tracts is greatest in areas least suitable for development, such as steep slopes, wet soils, and unsewered or publicly-owned areas. The region’s forested areas tend to occur where land is not desired for other uses; “many areas that are already forested are that way because there are no feasible land uses.”

The use of public policy to protect trees and forested area is hindered by a general lack of understanding of the financial value of the functions performed by these resources. For example, development decisions and project design typically don’t account for the role of trees
in managing stormwater, stabilizing streambanks or hillsides, and moderating temperatures and air pollution, nor for the connection between these functions and their respective financial costs. Transportation and other public development projects tend to view natural areas as “paths of least resistance” and lowest cost, as exemplified by removal of more than 5,000 trees planted by Cincinnati Parks in lieu of adjusting a railroad line as part of the I-75 expansion. In rural areas, forested tracts are not necessarily managed for their timber value (income can be comparable to agricultural products) and continue to be cleared for pastureland or subdivided for conversion to large-lot developments. The comment “protecting forested tracts would be very difficult” was made in the context of public and political perception of trees and their conservation value.

The outlook for tree and forest retention and expansion is challenged by poor tree maintenance, development practices, insect infestations, and invasive species. In many developed areas and along public streets, the long term growth of tree plantings is jeopardized by poor planting and development practices involving topsoil removal and soil compaction. In some places, poor maintenance practices such as volcano mulching and restrictions under utility wires are other factors contributing to poor tree canopy health. Trees conserved on private and public lands may be at risk from insect infestation or invasive plants. Reforestation is becoming more expensive and retention is becoming more difficult because of honeysuckle, pear, and other invasive species.

Conserve Stream Corridors (maintain corridor connectivity). The feasibility of conserving stream corridors depends largely on greater use of stream buffers, which are “probably the single best management practice that could be put on the ground,” and reduced use of culverts and stream piping.

Local counties have established or considered stream buffers to different degrees; county requirements vary widely and could be more effective in every case. The value of stream setbacks includes reducing public sector costs by allowing for corridor functions that provide flood control, stormwater management, habitat, water quality improvements, aquifer protection, and other benefits. The establishment of stream buffers is hindered by a general lack of understanding of their benefits and concerns over perceived “taking.” Stream buffers can help address the other major environmental concerns considered in the consultations – they provide space for forested area and green infrastructure, protect high quality streams, and reduce impervious surface impacts.

Divert Roadway Runoff from Direct Entry into Streams. Green infrastructure makes it technically feasible to “divert roadway runoff from direct entry into streams,” but greater use of green infrastructure depends on changes in regulations (to strengthen requirements or incentives).

Green infrastructure provides the capability to avoid discharging unfiltered, high temperature runoff into streams or entering storm and combined sewer systems. The technology has been used in some roadway projects and is effective and do-able, but its greater use appears to
depend on changes in development or stormwater regulations that provide incentives or requirements.

**Protect Streams Not Yet Degraded.** It’s feasible to protect streams not yet degraded in terms of opportunity and technology, but it’s not clear how that protection might occur.

Ohio and Kentucky have some measures in place to help protect this region’s high quality rivers or streams. At the local level, zoning can be used to establish buffers for protecting streams, but zoning may not be applicable for protecting streams based on differences in quality. Steps toward better protection would include increased local awareness of the locations of high quality streams and improved public understanding of the financial costs of stream restoration compared to stream protection.

**Constrain the Growth of Impervious Surface.** It’s technically feasible to constrain the growth of impervious surface by installing raingardens, pervious surfaces, and other best management practices, but green infrastructure is not widely used.

Local agencies may advocate impervious surface constraints as “best” strategies for protecting environmental resources, but they do not always effectively promote or require them. Suggestions were to advance the use of conservation design or requirements for stormwater BMPs, or use stormwater management programs to mitigate rather than constrain the growth of impervious surface, or develop a more standardized approach to stormwater management so that jurisdictional variations are reduced and environmental protection is expanded.

**Perspectives on State Environmental Protection Programs**

The perceived or potential effectiveness of state programs polices, plans, and other strategies referenced during discussion are summarized below. This summary and appendices may be used to:

- inform state agencies of how their programs are viewed and of suggestions for improvement and
- inform local agencies of resources or opportunities made available by state agencies for conserving or protecting environmental resources.

Programs in the list below and in the appendices are divided into “federally-based state programs” (common to all states and developed in response to federal requirements) and programs unique to Ohio, Kentucky, or Indiana. Summary statements reflect comments made; the appendices provide a fuller perspective of individual programs. Appendices include comments that are the basis for summary statements and also include (for some programs) a program description, references to related federal or state programs, and a website.
Federally-Based State Programs (Appendix D-5)

- **319 Grant Programs** are viewed as both beneficial (for conservation) and burdensome (for administration).
- **401 Certification** provides state perspective on the need to protect wetlands and other water resources from development impacts.
- **Agricultural programs** would be more effective if funding were targeted to problem areas.
- **Antidegradation policy** varies by state but does not provide protection from stormwater impacts – policy includes opportunity for local involvement in a triennial re-evaluation of stream classifications.
- **Comprehensive Wildlife Conservation Strategies** (State Wildlife Action Plans) enable states to obtain grants for conserving priority conservation areas and to avoid costs for recovery of endangered species.
- **Designated Use Categories** vary by state but include a process for periodic local comment on the uses assigned to individual streams.
- **Integrated Report Updates** are or will soon be available for 2012 with information that was not available for use in OKI consultations.
- **MS-4 Designations** will increasingly help reduce degradation of local streams.
- **Natural Heritage Database** is maintained by each state to track “elements of biological diversity” across state and national boundaries and to identify potential conservation targets.
- **Stormwater construction permits** are helping to protect streams.
- **Total Maximum Daily Loads/TMDLs** are great starting points for bringing streams up to standards – the challenge is implementation.

Ohio Programs (Appendix D-6)

- **Balanced Growth Program** could be more effective if incentives were greater.
- **Big Darby Watershed Plan** can be used as a model for local conservation planning.
- **Clean Ohio Fund** has been extremely important for local conservation and needs to be continued.
- **Enterprise Funds** would be more effective for stormwater projects if spending were restricted to this purpose, as required.
- **ERIN** (Earth Resources Information Network) provides tools to “facilitate inclusion of Ohio’s soil, water and natural resource data into private and public land use decisions.”
- **Forest Tax Law** helps maintain forested area.
- **Primary Headwater Habitat Initiative** promotes protection of an important habitat and resource.
- **Small Government Fund** is a good local funding source that could ideally be expanded to include “green” public works projects.
- **State Scenic River** designation provides limited but important protection to the Little Miami River.
- **Surface Water Improvement Fund (SWIF) Grants** (319 grant program) can be used for green infrastructure and resource restoration, but the application process requires considerable staff time.
• **Water Trails Program** works to increase recreational use of water resources, which in turn increases support for conservation.

• **Water Resource Restoration Sponsor Program (WRRSP)** has been used to conserve local riparian forest.

• **Watershed Action Plans** have produced good recommendations, but the challenge is implementation.

**Kentucky Programs (Appendix D-7)**

• **319 Grant Program** helps conserve land and protect resources.

• **Designated Use as Outstanding State Resource Water** increases the potential to protect these water resources.

• **Kentucky Heritage Land Trust** could be used to conserve more land in Northern Kentucky.

• **Watershed Plans** can produce locally-based solutions.

**Indiana Programs (Appendix D-8)**

• **319 Grant Program** has benefitted Dearborn County.

• **401 Certification Program** needs more information on good mitigation sites so that conservation can better target high-quality streams and wetlands.

• **Bicentennial Nature Trust** offers potential to conserve area in Dearborn County.

• **Classified Forest Program** is effective for conserving forest and can generate income for landowners that want to maintain their land longterm.

• **Designated Use as “Exceptional Use Waters”** does not apply to the Whitewater River – that designation may be warranted but would require local initiative to advocate for its consideration in the state’s rule-making process.

• **External Data Framework** administrators are soliciting water quality data from local sources.

• **Floodplain Permits** authorize projects and cut-and-fill practices that result in floodplain fill and contribute to downstream flooding.

• **Indiana Dept. of Natural Resources Grants** could support efforts to conserve high quality areas or resources if eligibility criteria were modified.

• **Indiana Heritage Trust (IHT)** is a potential funding source for conserving areas that protect rare species in Dearborn County.

• **Mitigation Matchmaker** can be used by Indiana landowners to list sites or by project sponsors to find sites for mitigation projects.

• **Natural Heritage Database** is used to direct conservation funds to the best sites but may not fully account for Dearborn County conservation needs and opportunities.

• **Outstanding Rivers List** does not protect water resources through regulation.

**Comments on Local Environmental Protection Strategies**

Local environmental protection strategies referenced during discussion and comments on their effectiveness are summarized below. All strategies are relevant for considering the potential to
better protect local environmental resources, but they are not equally relevant among local jurisdictions. The summary and appendices may be used to:

- inform state agencies of how they could better support local abilities to protect environmental resources and
- inform local agencies of options that might better protect their resources and avoid impact costs.

Summary statements reflect comments made; the appendices provide a fuller perspective of individual programs. Appendix D-9 includes comments that are the basis for summary statements.

In addition to the strategies listed below, local ability to protect environmental resources from adverse development-related impacts partly depends on local authority and local initiatives to influence the location and intensity of development (planning and zoning) and to manage stormwater (to meet Clean Water Act goals). Local comprehensive plans and local zoning and stormwater management regulations provide a framework that is critical to the effectiveness of local environmental protection efforts. Discussion indicated that:

- **Planning** is key for protecting resources before impacts occur that will cost money later.
- **Zoning** is not typically used to conserve environmental resources and may be constrained by state statute (e.g., Ohio), but it can be used to expand conservation design and green infrastructure, and it may have the potential to protect high quality areas as open space.
- **Stormwater regulations** are expanding opportunities to manage runoff in ways that reduce adverse and costly environmental impacts.

The following local strategies were referenced for their use or potential use to avoid environmental impacts (i.e., protect resources) or to conserve resources. Most of these strategies are for guiding development or managing stormwater, but a few are for conserving or restoring resource areas. Strategies may involve the use of regulations or incentives.

**Balanced Growth Plan**  Clermont County’s balanced growth plan for the Middle East Fork watershed may provide a model for other parts of the region.

**Conservation Design** (includes the use of green infrastructure in new residential development projects)  Conservation Design could help reduce the growth of impervious surface and protect aquatic resources in developing areas.

**Constraints on Impervious Surface**  Constraints on impervious surface, which would greatly benefit environmental resources, can be advanced by development regulations or incentives that limit parking lot or other impervious surface size.

**Curb-and-Gutter Alternatives** (the use of green infrastructure for managing roadway runoff)  Curb-and-gutter alternatives would be used more often if local regulations were revised.

**Detention Basin**  Design requirements for detention basins need to be modified so that released flows are more similar to a natural flow regime.
Donations of Land  Land donation as a project prerequisite could help maintain areas with conservation value if the donation requirement were designed for that purpose (as opposed to a general requirement).

Easements  Easements could be highly effective for conservation and used more often if incentives were increased to cover more of the landowner cost.

Green Infrastructure  Green infrastructure can be used to avoid project impacts on environmental resources and thus reduce cumulative impacts and their cost. (See Chapter 2 on Major Environmental Concerns for comments on green infrastructure’s feasibility.)

Mitigation of Impervious Surface (as part of stormwater regulations)  Requirements to mitigate impervious surface might be a more effective tool for reducing environmental impacts than restrictions on the growth of impervious surface.

Parks  The ability of parks to protect environmental resources depends partly on the availability of funds for park maintenance and acquisition.

Public Projects  Public projects may provide opportunity to conserve or protect environmental resources through their design.

Reduced Mowing  on public lands (e.g., highway rights-of-way, parks, public properties) Reduced mowing can expand wildlife habitat and reduce maintenance costs.

Soils Protection  through practices that retain topsoil and soil structure (and reduce compaction and disturbance) Soils protection results in increased infiltration, reduced stormwater runoff, better tree retention, and lower property maintenance costs.

Stormwater Permit Overlay  An example of a stormwater permit overlay is included in the Big Darby watershed plan.

Stream Buffers (riparian buffers)  Stream buffers are being used more widely but are generally not designed to their optimum ability to avoid impact costs and protect resources.

Transfer of Development Rights (TDR)  TDR can conserve high-value resources by shifting development to designated growth areas, but that would require state legislation in Ohio and Indiana.

Transportation Planning and Project Design  Local transportation planning and project design can reduce costs related to environmental impacts. (See Chapter 2 section on project-level impacts and Chapter 4 section on suggestions for transportation policies and practices.)

Tree Planting and Retention  Trees can effectively reduce stormwater runoff and flooding.
Chapter 4
Improving Environmental Protection:
Suggestions from Consultations

Suggestions were made by consultation participants for how to better protect local environmental resources. Suggestions occurred throughout the discussions but particularly in response to questions about how to better address the Major Environmental Concerns and as part of the project-level consideration of transportation’s potential environmental effects.

Suggestions reflect participants’ experience with environmental issues and with environmental protection programs and strategies. This chapter includes participants’ comments on obstacles to their efforts to protect environmental resources, which indicates how strategies could be made more effective. The remainder of this chapter presents participants’ suggestions for how local environmental protection strategies, transportation improvements, and regional-level support can better protect local environmental resources and avoid costly impacts.

Impediments to More Effective Environmental Protection

Discussion included numerous comments on obstacles to efforts to address the Major Environmental Concerns and protect environmental resources. Those comments are consolidated below into a list of nine “impediments.” Appendix D-10 includes the comments on which this list is based.

“Impediments” are a basis for considering how to improve strategies for addressing environmental issues. The impediments identified in consultations indicate a general lack of understanding of and failure to account for environmental impact costs, which are reflected in public policy by a lack of adequate financial resources and effective strategies for environmental protection. These impediments can be addressed by changes to public policy, but the resistance to and difficulty of making policy changes is itself an impediment to better environmental protection.

Comments on the general lack of understanding of environmental resource functions, vulnerability, and values is the basis for identifying these impediments:

▪ the consequences of conventional development practices are not well understood,
▪ the benefits of avoiding environmental impacts are not well understood, and
▪ the financial values of environmental resources are not adequately accounted for.

The cumulative effect of impacts relevant to the first two impediments is exemplified by the effect of stream impairments on groundwater recharge and stream flow, water treatment costs, the need for Total Maximum Daily Loads, downstream flooding, and species loss. An example of resource financial values (third impediment above) is the functions provided by trees related to stormwater management, erosion control, hillside and streambank stability, temperature moderation, and pollutant filtration.
Public perceptions and practices – represented by the first three impediments – shape public policy, which is limited in its ability to protect environmental resources as indicated by the following impediments:

▪ public funding levels hinder the ability to protect and conserve environmental resources,
▪ state policies could better support efforts to protect environmental resources,
▪ local planning could be more effective for protecting environmental resources,
▪ incentives would be more effective if they were adequate, and
▪ changes are needed to make existing regulations more effective.

Efforts to improve state programs and local strategies are limited by this impediment:

▪ change is difficult.

Suggestions for Local Environmental Protection Strategies

Discussion included suggestions for improving the effectiveness of local environmental protection efforts. Suggestions below capitalize on local agency responsibilities, relationships, and resources to optimize opportunities and capabilities for environmental protection. These suggestions are separate from those in the previous chapter related to development and stormwater management strategies but serve the same purpose, which is to:

▪ inform state agencies of how they could better support local abilities to protect environmental resources and
▪ inform local agencies of options that might better protect their resources and avoid impact costs.

The following suggestions involve local agency use of public education, existing programs and common interests, or increased focus on local resource needs as strategies for improving environmental protection. Comments that are the basis for the following summary statements are provided in Appendix D-11.

Suggestions related to public education represent strategies that would help address all of the impediments previously listed:

▪ Demonstration projects are an effective means of expanding awareness and improving understanding of how and why to do things differently.
▪ Public education needs to be more strategic and less general, which involves targeting education to specific audiences and clarifying the relevancy of environmental protection to people’s self-interest.

Suggestions that capitalize on existing programs and common interests could improve the effectiveness of local regulations and incentives:

▪ Review and revision of local regulations could remove obstacles and provide incentives for good development practices that would reduce environmental impacts.
▪ More standardized regulations could reduce environmental impacts more effectively than individual jurisdiction efforts to strengthen regulations and incentives.
Suggestions are for local agencies to take more initiative and focus more directly on protecting their community’s environmental resources:

- **Local initiative can influence state conservation efforts (and funding), such as by targeting or protecting local resources or providing information to state agencies.**
- **Identification of target conservation areas can be used to optimize funding opportunities and conserve area before development occurs.**
- **Ecological data could be used more effectively in local efforts to protect environmental quality.**

### Suggestions for Improving Transportation

Consultations provided comments on how transportation policy, planning, project design, and maintenance at both state and local levels can help reduce impacts and better protect forests, streams, wildlife, and other environmental resources. Comments were made in discussions and in the project-level review of the draft 2040 regional transportation plan. The review included inquiries about potential environmental effects or impacts, suggestions for how impacts could be reduced, and opportunities for enhancing or restoring environmental resources.

Suggestions below relate to transportation policies and practices, types of project-level environmental impacts, and options for optimizing project benefits (using transportation projects for environmental and community benefits). The following suggestions for improving transportation can inform:

- state transportation departments of local preferences and potential for improving or maintaining transportation facilities and
- local agencies of needs and options for designing or managing roadways to better protect local environmental resources.

### Transportation Policies and Practices

The following suggestions are mostly from discussions about addressing the Major Environmental Concerns. Appendix D-12 lists the comments on which the following suggestions are based and provides a fuller basis for understanding participant suggestions.

Suggestions that apply to transportation planning and policy are represented by these summary statements:

- **Account for the financial value of environmental resources in transportation planning and project design.**
- **Apply the same stormwater management standards to state transportation projects that are applied to local projects.**
- **Expand the scope of mitigation to include the ecological value of land developed.**
- **Inform environmental agencies of potential mitigation needs as soon as possible.**
Suggestions for using project design for avoiding impacts and protecting resources are represented by these summary statements:

- **Reduce the use of culverts and stream piping.**
- **Design stream crossings to protect streams and wildlife.**
- **Use BMPs (best management practices) to manage roadway runoff and avoid direct discharges to streams.**
- **Use transportation improvements to advance environmentally sustainable development and protect or restore environmental resources – design improvements to optimize the use of public investment.**

Suggestions for using project maintenance to reduce stormwater impacts or protect or restore resources are indicated by this summary statement:

- **Mow less, plant trees, and manage roadway right-of-way to protect and enhance environmental resources.**

**Types of Project Impacts**

The project-level review indicated common concerns about environmental impacts from transportation projects in addition to concerns about individual projects (see Chapter 2 section on project-level impacts). Participants’ concerns and suggestions about types of project impacts were presented to OKI’s Board and Intermodal Coordinating Committee (ICC) and at OKI open houses (as a basis for public comment) prior to the transportation plan’s adoption.

Suggestions below include an indication of the type of impact of concern based on the presentation to OKI’s Board and ICC. Appendix D-13 includes information provided at the public meetings. Suggestions for avoiding types of project impacts are as follows:

- **More green infrastructure and less road salt** to address concerns about runoff from bridges - Stream crossings are a common concern, especially for streams or rivers that are relatively unimpaired or Regionally Significant, or where roads cross aquifers.

- **Fewer culverts and better bridge design** to address concerns for maintaining streams – including headwaters – and for maintaining stream corridors and their value for flood storage, groundwater recharge, and other functions.

- **Use of green infrastructure** to detain roadway runoff so that pollutants can be filtered, temperatures lowered, and volume and velocity dissipated before reaching the stream - Roadway runoff is a major source of impairments to local streams and is a special concern where it’s discharged from interstates and other highways.

- **Direction of roadway runoff away from combined sewers** and into storm sewers or streams (after pretreatment) to help reduce flow to combined sewers in those areas.
• **Keeping new roadways and fill out of floodways** to address concerns about impacts on floodways and environmental resource functions

• **Avoidance of Agricultural Districts** to address concerns about impacts to farmland and environmental resources

• **Use of conservation design in developing areas** to address concerns about impacts to environmental resources in developing areas

**Optimizing Project Benefits**

The project-level review included suggestions for using transportation projects for environmental and community benefits. Suggestions were included in the presentations to OKI’s Board and Intermodal Coordinating Committee (ICC) and in the information provided at OKI open houses prior to the plan’s adoption.

As mentioned in the Board and ICC presentations, these suggestions are not about reducing impacts but about using roadway improvements to enhance or restore resources for their environmental or community benefit. Most options would need to be identified early on so they can be integrated into project design, but environmental benefits can also be provided through maintenance practices. These options depend on project sponsor initiative – or local agency coordination with project sponsors – to capitalize on transportation investments so they realize their full value beyond the transportation improvement.

Suggestions below for using transportation projects for the benefit of environmental resources and local communities are similar to those provided at the public meetings (Appendix D-14 includes suggestions in a tabular format).

• **Divert roadway runoff from the combined sewer system**  Reduced flows to combined sewers result in reducing costs for treatment or overflow reduction. Diversion to streams (after pretreatment) increases stream base flow and improves aquatic habitat, which is especially appropriate for upstream areas.

• **Add pervious pavement treatments**

• **Add trees to roadway right-of-way** (including medians and cloverleafs)

• **Include sufficient right-of-way for installing green infrastructure to manage roadway runoff.**

• ** Optimize the environmental benefits of maintenance practices** Reduce mowing in roadway right-of-way and expand natural or native vegetation (mow for safety and allow the rest to revert to more natural habitat).
▪ **Add trails**

▪ **Optimize mitigation benefits** Concentrate compensatory mitigation in the watershed where impacts occurred (priority over use of consolidated mitigation site). Develop the mitigation agreement concurrent with or after project development (not before, in case additional impacts arise).

**Suggestions for Regional-Level Support of Environmental Protection**

Consultations included suggestions for how OKI could better support state and local efforts to protect environmental resources. Suggestions were made during general discussion and in response to the question: How could OKI better support local efforts to conserve or protect environmental resources?

Suggestions involve applying OKI’s existing functions and responsibilities to better protect environmental resources and avoid impact costs. The suggestions below are based on comments provided in Appendix D-15.

▪ **Continue evaluation and further refinement of OKI’s transportation scoring and prioritization process** to promote better environmental protection and expanded mode choice.

▪ **Use OKI forums** to collaboratively discuss environmental issues and strategies to address them.

▪ **Continue mapping** of environmental resource data and other information applicable to planning for environmental resource protection.

▪ **Support local agency efforts** to protect environmental resources by developing and providing model regulations, cost benefit data, funding sources, sites of demonstration projects, and other relevant information.

▪ **Coordinate with state and local agencies** to advance better stormwater management in transportation project design.

▪ **Continue public education efforts** that provide perspective on the value of protecting environmental resources.
Appendix A

Scripts per State Session
Ohio Session
2012 Environmental Consultations
March 8, 1:00-4:00

Welcome  begin by 1:05
Slide  OHIO SESSION OF 2012 ENVIRONMENTAL CONSULTATIONS WITH STATE AND LOCAL AGENCIES ON THE 2040 REGIONAL TRANSPORTATION PLAN

Slide PART 1 - ENVIRONMENTAL CONSULTATIONS
INTRODUCTION TO CONSULTATIONS AND REGIONALLY SIGNIFICANT ENVIRONMENTAL RESOURCES
Self-introductions

Slide Intended Results of Environmental Consultations
• Better decisions for improving transportation
• Better decisions about how development occurs
• Transportation improvements and a development process that more fully account for their environmental effects and financial consequences

Today’s session is different from previous consultations but the purpose is the same --to result in better decisions for improving transportation and how development occurs. Consultations have become part of regional transportation planning to help reduce negative and costly environmental impacts. They involve considering options to avoid impacts instead of mitigate for them --and options to maintain resources already targeted for conservation, as development expands. We hope you welcome this opportunity – as we do – to consider the potential for change. Today’s session focuses first on local resources, and then on options to better protect them.

Slide Categories of Regionally Significant Environmental Resources
Regionally Significant Streams
State Conserved Areas
Wetlands
Endangered, Threatened, or Rare Species
Prime Farmland and Agricultural Districts

These are the categories that we call Regionally Significant Environmental Resources. They’re also listed in table 1 of your packet. These are mostly high-quality or rare resources – or help to sustain other high-quality or rare resources. They can involve mitigation. We identified the local resources in these categories from state conservation plans, policies, maps, or inventories. We’ll add more categories in the future from historic resource inventories, forest assessments, and other state data sources.

Slide Map Layer-The Developed Area
This is the base layer of the map to be used later on for comparing Regionally Significant Environmental Resources with transportation projects. The grey shows the Developed Area,
which represents transportation’s effects on land-use and area with public investments to support development. These next slides feature the resource categories.

**Slide**  Map Layer Addition-Regionally Significant Streams
Regionally Significant Streams are in dark blue. These include river segments with the highest value for aquatic habitat -- and streams that are relatively unimpaired. Most of the least-impaired streams are outside of the Developed Area.

**Slide**  Map Layer Addition-State Conserved Areas and Wetlands
The category of State Conserved Areas is represented by green. These are state parks, state wildlife areas, and state preserves – listed in Table 2 of your packet. The wetlands category isn’t shown on this map – except for a symbol that doesn’t show up on the screen – to identify The Oxbow on the lower Great Miami River, 2500 acres of Ohio River bottomlands. Most wetlands in the OKI Region are less than 2 acres – many of the larger ones are in State Conserved Areas or local parks.  *Nationwide, wetlands are sole habitat for more than a third of threatened and endangered species, which partly explains why wetland size does not affect requirements for mitigation.*

**Slide**  Pictures & Text-Endangered, Threatened, and Rare Species
- 165 local species are listed at federal or state levels as Endangered, Threatened, or Rare (20 of these are also federally listed)
- Nearly 2/3 of the 104 animal species depend on aquatic habitat for survival
- Nearly half of the aquatic species are “critically imperiled” or “imperiled” globally

Endangered, Threatened, and Rare Species occurrences aren’t mapped, either, but Table 3 in your packet identifies 165 local species -- by county -- that are listed at state or federal levels as Endangered, Threatened, or Rare. Nearly two thirds of the animal species depend on aquatic habitat -- Nearly half of these are “critically imperiled” or “imperiled” at global levels. Their habitat includes areas identified as Regionally Significant Streams, State Conserved Area, and Wetlands.

**Slide**  Map Layer Addition-Prime Farmland & Agricultural Districts
The category of Prime Farmland & Agricultural Districts was added after the last consultations. This shows three farmland categories where federally-funded projects are subject to mitigation requirements, and shows Agricultural Districts enrolled in 5-year protection programs -- per property owner request -- where states define the mitigation requirements. Projects that avoid the need for mitigation in these areas help conserve some of the world’s most productive soils or otherwise help maintain farmland.

**Slide**  Categories of Regionally Significant Environmental Resources
Regionally Significant Streams
State Conserved Areas
Wetlands
Endangered, Threatened, or Rare Species
Prime Farmland and Agricultural Districts
Q1-1 Do you have any comments or questions about these resources before we move on?

**Slide**  **PART 2 - ENVIRONMENTAL CONSULTATIONS**

**REGIONALLY SIGNIFICANT STREAMS AND AN UPDATE ON LOCAL RIVERS**

All the resource categories that were mentioned are relevant for today’s discussion, but we have additional background on Regionally Significant Streams. We’ll hear state perspective on some of these streams, but first I’ll explain why these are classified as Regionally Significant.

**Slide**  **Regionally Significant Streams**

Streams that meet any of these criteria:
- Designated as a Scenic River
- Identified as a Priority Area for Conserving Wildlife Species
- Designated for a High Level of Aquatic Life Use
- Reported as Attaining its Aquatic Life Use Designation
- Classified for High Ecological Value in Antidegradation Policy

Regionally Significant refers to any river or stream that meets any of these five criteria, which are based on state data. You may want to refer to Table 4 – which shows information for Ohio in blue.

**Slide**  **Criteria for Identifying Regionally Significant Streams**

1. **Designated as Scenic River**
   - Little Miami River (national & state systems)
2. **Identified as Priority Area for Conserving Aquatic Wildlife**
   - Little Miami River, Great Miami River
3. **Designated for a High Level of Aquatic Life Use** (stream or segment)
   - Exceptional Warmwater Habitat (11), Coldwater Habitat (1)

The first criteria applies to only one stream in the region -- the Little Miami River. It’s part of Ohio’s scenic river system and one of the ¼ of 1% of rivers in the national system (166). **State Scenic River entire length -- National Scenic River north of Foster -- National Recreational River below Foster** For the second criteria, the state wildlife strategy identifies 11 Ohio watersheds as priority conservation areas. The Little Miami River ranks #1; the Great Miami River ranks #5. Lastly, high-level-of-use for aquatic life applies to streams designated as Exceptional Warmwater, or as Coldwater habitat. Our region has 11 streams designated for Exceptional Warmwater use. They include the Little Miami River, the East Fork of the Little Miami, and the Whitewater River, and tributaries to the Great and Little Miami Rivers, and the Whitewater (4, 3, 1). The region’s only Coldwater habitat stream is Dry Run in Warren County -- tributary to Turtle Creek.

4. **Reported as Attaining its Aquatic Life Use Designation**
   - 5 of 23 support use as Exceptional Warmwater Habitat
5. **Classified for High Ecological Value in Antidegradation Policy**
   - 4 classified as Ohio Superior High Quality Water
   - 1 proposed as Ohio Superior High Quality Water
The top criteria here -- attainment of designated use -- resulted in classifying 23 streams or river segments as Regionally Significant. Most of these attain use as Warmwater habitat, but Exceptional Warmwater is attained by 5 of the 11 streams designated for that use – including the Little Miami River – between O’Bannon and Caesar’s Creek – and the Whitewater River. Data is from Ohio’s 2010 Integrated Report. The last criteria recognizes streams classified for high ecological value under antidegradation policy. The category of Superior High Quality Water applies to four streams and is proposed for one other (applies to Whitewater, East Fork, 7mile, Clear Cr—proposed for Four Mile). The category of Ohio Outstanding State Water – which provides the greatest protection from dischargers – applies to only two streams -- Twin Creek in Warren County and the Little Miami River. These two categories account for 7 of the region’s 11 Exceptional Warmwater streams. (na to Elk Cr, Halls Cr, Newman Run, Dry Fork).

Q2-1 Do you have any questions you’d like to ask about these resources?

To provide us with a better understanding of some of these Regionally Significant streams, I’m pleased to introduce Bob Gable, Scenic Rivers Program Manager, with the Ohio Department of Natural Resources.

Slide PART 3 - ENVIRONMENTAL CONSULTATIONS STATE ENVIRONMENTAL PROTECTION STRATEGIES

Thank-you, Bob, …States help protect our Regionally Significant resources. Staff from state agencies have graciously agreed to improve our understanding of how some state programs and policies apply to local resources.

Slide Ohio Integrated Report and Assessment Categories

Jeff DeShon, Environmental Manager for the Ecological Assessment Section, OEPA Division of Surface Water

Slide Ohio Antidegradation Policy

Mark Stump, Environmental Supervisor for the Permits and Compliance Section, Ohio EPA Division of Surface Water

Slide State Strategies - Discussion Question 1

▪ How might these programs or policies – or the data they contain – be used in local efforts to protect environmental resources?

Thank you all for the explanations and information you’ve provided. We have two questions – for the panel or anyone who might want to comment – and then we’ll open this to your questions.

Q3-1 Do you have any suggestions about how these programs or policies – or the data they contain – might be used in local efforts to protect environmental resources?

… Any suggestions for how local planning, stormwater management, parks, or conservation agencies could use these documents or data?

… For example, could data on the ecological value of local resources (assessment categories in Integrated Report, designation as Exceptional Warmwater Habitat) be used to influence zoning policy … or strengthen stream buffer requirements … or to target conservation practices? … Does
this new initiative for primary habitat headwater streams (field manual for evaluation) have potential use for project reviews?

**Slide**  
_**State Strategies - Discussion Question 2**_  
- How might local agencies influence the state’s development or use of these programs or policies?

**Q3-2**  
Do you have any suggestions for how local agencies might influence the state’s development or use of these programs or policies?

... For example, are there opportunities for local agencies to provide information or perspective?  
... Are there ways for local agencies to help state programs or policies be more effective?  
... For example, can local agencies influence which streams are classified for ecological value under antidegradation policy ... or provide input on permit requirements or reviews?

**Q3-3**  
Are there any other questions for the panel? _to finish by 2:25 max_

**At this point, we’ll break into groups by county.** The back of your agenda lists the group you’re assigned to. _NOTE: slides printed on handouts_

**Slide**  
_**PART 4 - ENVIRONMENTAL CONSULTATIONS**_  
_DISCUSSION STRATEGIES FOR AVOIDING ENVIRONMENTAL IMPACTS_  
60 min  
quick round of introductions (include “note-taker) and then get started This part of the discussion builds on what we learned from the previous consultations. To follow this, you’re going to need the last piece in your packet.

**Page 1**  
_**Previous Consultations – Discussion Framework**_  
- Separate state and local sessions  
- Focus 1) _How environmental resources can be adversely affected_ 2) _How adverse effects can be avoided_  

**Concerns**  
- _Primary Impacts from roadway runoff and project construction_  
- _Secondary Impacts from development and impervious surface facilitated by improved roadways_

We previously consulted _separately_ with state agencies (in 2009) and local agencies (2010 and 2011) about _how_ environmental resources can be adversely affected by the transportation plan – and _how_ adverse effects can be avoided. The environmental effects of concern included both Primary impacts – from roadway runoff and project construction – and secondary impacts – from development and impervious surface facilitated by improved roadways. _10 state agency divisions, 34 local agencies participated_

**Page 2**  
_**Previous Consultations – Major Environmental Concerns**_  
Major concerns are that...  
- _forested tracts remain intact_,  
- _stream corridors be conserved_,  
- _roadway runoff be diverted from direct entry into streams_,
streams not yet degraded be protected, and
• the growth of impervious surface be constrained

The second page summarizes what we heard from state agencies as major concerns about environmental impacts. Local agencies discussed how these concerns are addressed in their counties. They indicated that -- in general -- local processes for guiding development and managing stormwater,
• are not used to conserve forested area,
• commonly allow streams to be infilled or piped,
• commonly use curb-and-gutter systems that discharge roadway runoff directly to streams,
• do not differentiate for stream conditions, and
• are not effective for reducing roadway width, parking lot size, and other impervious surfaces.

Local agencies are working to improve environmental protection, but it’s an uphill job.

Page 3 Previous Consultations – Suggested/Discussed Strategies
Suggested by state agencies and discussed by local agencies for their potential for greater use:
• Low-impact development (LID) and green infrastructure for managing stormwater
• Integration of best practices into local code
• Conservation elements in local plans
• Conservation easements
• Watershed planning

The next page summarizes strategies suggested by state agencies as having the potential to help address their concerns, if they were used more widely at the local level. Local agencies discussed their efforts to expand or strengthen these strategies, and the many obstacles that confront them. Your packet includes a summary of that discussion. The full report’s on OKI’s website.

Page 4 Potential Avoidance Strategies - Discussion Question 1
Retain forested tracts
Conserve stream corridors (maintain corridor connectivity)
Divert roadway runoff from direct entry into streams
Protect streams not yet degraded
Constrain the growth of impervious surface

• If you were to focus on one of these for your county – as the goal most feasible to achieve – which would it be?

Q4-1 Page 4 shows the major concerns re-phrased into action items that we want you to give us feedback about.
• If you were to focus on one of these for your county – or for this part of the state – as the goal most feasible to achieve -- which would it be?

... Another way of looking at this might be: In areas where these goals aren’t yet precluded by development, which might have the greatest chance for success?

Page 5 Potential Avoidance Strategies - Discussion Question 2
Retain forested tracts
Conserve stream corridors (maintain corridor connectivity)
Divert roadway runoff from direct entry into streams
Protect streams not yet degraded
Constrain the growth of impervious surface

▪ What strategies offer the greatest potential to address these concerns?
▪ Are there jurisdiction or agency programs that could serve as models?

Q4-2  next page  Numerous strategies are already in place for protecting environmental resources – for example, requirements or incentives for development or stormwater practices, the establishment of parks and easements, and Ohio Forest Tax Law. (CAUV/Current Agricultural Use Value program, stream buffer requirements,...)

▪ What do you think are the best strategies for addressing the concerns listed here?
(... In other words, what strategies do you think are most effective, or potentially most effective? )
... Can you suggest good examples or models?

Page 6  Potential Avoidance Strategies - Discussion Question 3
Retain forested tracts
Conserve stream corridors (maintain corridor connectivity)
Divert roadway runoff from direct entry into streams
Protect streams not yet degraded
Constrain the growth of impervious surface

▪ How can harmful practices be reduced?  (for example, stream piping and infill, tree clearance, stream-edge development, curb-and-gutter direct discharges)

Q4-3 Some conventional development practices run counter to ... or work against ... the concerns listed here -- practices like stream piping, tree clearance, stream-edge development, and curb-and-gutter direct discharges.  flood plain development

▪ Any thoughts on how harmful practices can be reduced?
... How can practices that aggravate these concerns be changed?
... Do you know of successful efforts to replace these practices?

Page 7  Potential Avoidance Strategies - Discussion Question 4
Retain forested tracts
Conserve stream corridors (maintain corridor connectivity)
Divert roadway runoff from direct entry into streams
Protect streams not yet degraded
Constrain the growth of impervious surface

▪ What state-level initiatives could facilitate change in local strategies ... or increase use of effective strategies?

Q4-4 Previous consultations made it clear that change is difficult. The challenge of addressing the issues listed here is not just to identify effective strategies, but to implement them. Federal and state initiatives can be the carrot or the stick for change – such as federal policy for stormwater management, or state 319 programs for watershed planning.

▪ Can you suggest state-level initiatives that might facilitate change in local strategies – or that could expand implementation of effective strategies?
What might be done at a state level to result in greater use of local strategies like conservation easements, stream buffers, or low-impact development ... curb-and-gutter alternatives? appropriate road sizing?

Page 8 Potential Avoidance Strategies - Discussion Question 5
- Retain forested tracts
- Conserve stream corridors (maintain corridor connectivity)
- Divert roadway runoff from direct entry into streams
- Protect streams not yet degraded
- Constrain the growth of impervious surface
  - How could OKI better support local efforts to conserve or protect environmental resources?

Q4-5 Since the previous consultations, OKI has expanded mapping, revised project selection criteria, and applied for grants to improve planning for environmental resources.
- Do you have suggestions for how OKI could better support local efforts to conserve or protect environmental resources?

Revised scoring criteria for recommending projects to the transportation plan to award 5 points for avoiding impacts to regionally significant resource and 3 points for mitigating impacts (for projects with an impacts but that mitigate the impact; no points for projects with impacts that are not mitigated)

Page 9 Potential Avoidance Strategies - Discussion Question 6
- Retain forested tracts
- Conserve stream corridors (maintain corridor connectivity)
- Divert roadway runoff from direct entry into streams
- Protect streams not yet degraded
- Constrain the growth of impervious surface
  - Should other concerns be added?
  - Do you have additional comments on strategies for avoiding environmental impacts?

Q4-6 The list of concerns used for today’s discussion indicates major challenges to be met – or needs to be addressed – for protecting Regionally Significant Environmental Resources.
- Are there other concerns that should be included?
  (For example, since Prime Farmland has been added to the consultations map, does the list of concerns here need to be modified?)
- Do you have additional comments on strategies for avoiding impacts – or comments on today’s discussion – before we move on to transportation projects?

FINISH BY 3:10 maximum

Page 10 PART 5- ENVIRONMENTAL CONSULTATIONS
PROPOSED TRANSPORTATION PROJECTS AND THEIR ENVIRONMENTAL EFFECTS - DISCUSSION
The maps on the table are for comparing Regionally Significant Environmental Resources and transportation projects. There are two regional maps – the one described earlier, and a separate map for Prime Farmland.

**Page 11 County-Level Maps**
- Same Regionally Significant Environmental Resources as regional map and additions:
  - watershed boundaries (HUC-12)
  - Expanded State Conserved Areas to include local Parks and Preserves over 100 acres
  - Other Greenspace (smaller Parks and Preserves and Greenspace-Related uses)
  - Proposed transportation projects

The county map shows the same environmental resources as the regional map -- and some additional information. The additions are:
- watershed boundaries for HUC-12 watersheds
- an expanded category of State Conserved Areas that includes local Parks and Preserves over 100 acres
- a green pattern called “Other Greenspace” that shows smaller local parks & greenspace-related uses -- such as golf courses, cemeteries, & camps.
If you see something that should be changed, then we’d appreciate your marking it on the map or letting us know after the meeting.

**Page 12 Proposed Transportation Projects**
- Projects shown in pink
  - Proposed by local jurisdictions to meet local needs
  - Proposed to be recommended in regional transportation plan based on modeling, public review, and a scoring process
  - If recommended in adopted plan, then eligible for federal funding
  - Consultation comments used to inform public meetings and OKI Board prior to plan adoption

Transportation projects on the maps have codes that are listed in Table 5 in your packet. The dark colored projects have funds already committed. Projects that are pink have been proposed by local jurisdictions as meeting local needs based on local planning. They’re now proposed for recommendation in the regional plan based on modeling, public review and comment, and a numerical scoring process. Once projects are recommended in an adopted regional plan, then they’re eligible for federal funding. Discussion from Consultations will be included in comments that go to public meetings (mid-April), a public hearing (early May), and an environmental review provided to OKI's Board prior to action on plan adoption (June).

**Page 13 Transportation Project Categories**
- Projects expand transportation capacity
  - Dashed line
    - New roadway
  - Solid line
    - Expanded or improved roadway
  - Bullet point

OKI 2012 Environmental Consultations - Appendix A
Improvement to interchange (or non-roadway)
Projects on the map all expand transportation capacity. The dashed line indicates new roadway. The solid line indicates lane additions or major reconstruction. Bullet points indicate interchange improvements or -- if they’re in pink/proposed – can also be improvements to bike, freight, or transit facilities.

Page 14 **Comparison Question 1**
Do you have comments or concerns about the environmental effects or impacts of the proposed transportation plan or individual projects?

Q5-1 Do you have comments or concerns about the environmental effects or impacts of the proposed transportation plan or individual projects?

Page 15 **Comparison Question 2**
Any suggestions for how the impacts of any individual project could be avoided – or how its impacts could be reduced by state or local efforts?

Q5-2 Any suggestions for how any individual project’s impacts could be avoided – or reduced – by state or local efforts?

Page 16 **Comparison Question 3**
Are there projects that provide opportunity for enhancing or restoring environmental resources?

Q5-3 Are there projects that provide opportunity for enhancing or restoring environmental resources? ... Such as opportunity for expanding forested area ... or for stream day-lighting ... or wider stream buffers?

Page 17 **Comparison Question 4**
Are there any other comments you have on transportation projects or environmental resources?

Q5-4 As a final question, are there any other comments you have on transportation projects or environmental resources?

Finish by 4:00

I just want to thank all of you – for myself and on behalf of OKI – for coming today and contributing to this discussion. We really appreciate your giving us your time -- and your ideas. We'll be reporting back to you on the results....
Kentucky Session
2012 Environmental Consultations
March 13, 1:30-4:00

Slide  KENTUCKY SESSION OF 2012 ENVIRONMENTAL CONSULTATIONS WITH STATE AND LOCAL AGENCIES ON THE 2040 REGIONAL TRANSPORTATION PLAN

Slide  PART 1 – ENVIRONMENTAL CONSULTATIONS
      INTRODUCTION AND REGIONALLY SIGNIFICANT ENVIRONMENTAL RESOURCES

Self-introductions

Slide  Intended Results of Environmental Consultations

- Better decisions for improving transportation
- Better decisions about how development occurs
- Transportation improvements and a development process that more fully account for their environmental effects and financial consequences

Today’s session is different from previous consultations but the purpose is the same -- to result in better decisions for improving transportation and how development occurs. Consultations have become part of regional transportation planning to help reduce negative and costly environmental impacts. They involve considering options to avoid impacts instead of mitigate for them -- and options to maintain resources already targeted for conservation, as development expands. We hope you welcome this opportunity – as we do – to consider the potential for change. Today’s session focuses first on local resources, and then on options to better protect them.

Slide  Resource Categories

- Regionally Significant Streams
- State Conserved Areas
- Wetlands
- Endangered, Threatened, or Rare Species
- Prime Farmland and Agricultural Districts

Good afternoon... I’m going to start things off with an explanation of ... These are the categories that we call Regionally Significant Environmental Resources. They’re also listed in table 1 of your packet. These are mostly high-quality or rare resources – or help to sustain other high-quality or rare resources. They can involve mitigation. We identified the local resources in these categories from state conservation plans, policies, maps, or inventories. We’ll add more categories in the future from historic resource inventories, forest assessments, and other state data sources.

Slide  Map Layer-The Developed Area

This is the base layer of the map to be used later on for comparing Regionally Significant Environmental Resources with transportation projects. The grey shows the Developed Area, Which represents transportation’s effects on land-use and public infrastructure to support development. These next slides feature the resource categories.
Slide  Map Layer Addition—Regionally Significant Streams
Regionally Significant Streams are in dark blue. These include river segments with the highest value for aquatic habitat -- and streams that are relatively unimpaired. Most of the least-impaired streams are outside of the Developed Area.

Slide  Map Layer Addition—State Conserved Areas and Wetlands
The category of State Conserved Areas is represented by green. These are state parks, state wildlife areas, and state preserves – listed in Table 2 of your packet. The wetlands category isn’t shown on this map – except for a symbol that doesn’t show up on the screen – to identify The Oxbow on the lower Great Miami River, 2500 acres of Ohio River bottomlands. Most wetlands in the OKI Region are less than 2 acres – many of the larger ones are in State Conserved Areas or local parks. Nationwide, wetlands are sole habitat for more than a third of threatened and endangered species, which partly explains why wetland size does not affect requirements for mitigation.

Slide  Pictures & Text—Endangered, Threatened, and Rare Species
▪ 165 local species are listed at federal or state levels as Endangered, Threatened, or Rare (20 of these are also federally listed)
▪ Nearly 2/3 of the 104 animal species depend on aquatic habitat for survival
▪ Nearly half of the aquatic species are “critically imperiled” or “imperiled” globally

Endangered, Threatened, and Rare Species occurrences aren’t mapped, either, but Table 3 in your packet identifies 165 local species -- by county -- that are listed at state or federal levels as Endangered, Threatened, or Rare. Nearly two thirds of the animal species depend on aquatic habitat -- Nearly half of these are “critically imperiled” or “imperiled” at global levels. Their habitat includes areas identified as Regionally Significant Streams, State Conserved Area, and Wetlands.

Slide  Map Layer Addition—Prime Farmland & Agricultural Districts
The category of Prime Farmland & Agricultural Districts was added after the last consultations. This shows three farmland categories where federally-funded projects are subject to mitigation requirements, and shows Agricultural Districts enrolled in 5-year protection programs -- per property owner request -- where states define the mitigation requirements. Projects that avoid the need for mitigation in these areas help conserve some of the world’s most productive soils or otherwise help maintain farmland. 1) All areas are Prime Farmland 2) Prime Farmland if drained and/or either protected from flooding or not frequently flooded during the growing season 3) Farmland of local or statewide importance

Slide  Categories of Regionally Significant Environmental Resources
Regionally Significant Streams
State Conserved Areas
Wetlands
Endangered, Threatened, or Rare Species
Prime Farmland and Agricultural Districts

Q1-1 Do you have any comments or questions about these resources before we move on?
All the resource categories that were mentioned are relevant for today’s discussion, but we have additional background on Regionally Significant Streams. We’ll hear state perspective on some of these streams, but first I’ll explain which streams are classified as Regionally Significant and why.

**Slide Regionally Significant Streams**

*Streams that meet any of these criteria:*

- Designated as a Scenic River
- Identified as a Priority Area for Conserving Wildlife Species
- Designated for a High Level of Aquatic Life Use
- Reported as Attaining its Aquatic Life Use Designation
- Classified for High Ecological Value in Antidegradation Policy

Regionally Significant refers to any river or stream that meets any of these five criteria, which are based on state data. You may want to refer to Table 4 – which shows information for Kentucky in green.

**Slide Criteria for Identifying Regionally Significant Streams**

1. **Designated as a Scenic River**
   - Licking River
   - Ohio River east of Licking River confluence
2. **Identified as a Priority Area for Conserving Aquatic Wildlife**
   - Licking River
   - Ohio River east of Licking River confluence
3. **Designated for a High Level of Aquatic Life Use / Ky. OSRW**
   - Licking River below the SR536 bridge
   - Two Licking River tributaries
   - Four Ohio River tributaries

The first criterion -- for scenic rivers -- applies only to the Little Miami River in Ohio. The second criterion refers to priorities in the state wildlife strategy for conserving aquatic habitat. Kentucky’s plan identifies the Licking River watershed -- and the Ohio River watershed east of the Licking River -- as conservation areas for mussels, which is the most rapidly declining species group in North America. The plan identifies two sub-watershed priority areas for mussels -- both in Campbell County -- one below Twelvemile Creek in the the Ohio River Basin -- and one on the county’s southern border in the Licking River Basin. Conservation Areas 8-digit HUC level and 14-digit = below 12mile Cr 05090201380110 & fraction of wtrshd forsegment tween Willow Cr & Grassy Frk 05100101230290 conservation value accounts for “potential” and not just “existing” condition. A stream can have high quality that’s been degraded in recent history. Imp= absence of dams

The last criterion here that refers to high-level-of-use for aquatic life applies to streams designated as Kentucky Outstanding State Resource Water, which applies to 7 streams or stream segments in Northern Kentucky. They are the Licking River below the SR536 bridge, 2 Licking River tributaries in Kenton County – Bowman Creek and Sawyers Fork -- and 4 Boone County streams or stream segments in the Ohio River Basin -- Garrison Creek, Second Creek (above backwaters), Double Lick Creek (tributary to Woolper Creek), and Little South Fork (above river mile 1.2).
Slide  Criteria for Identifying Regionally Significant Streams
4. Reported as Attaining its Aquatic Life Use Designation
   15 streams or stream segments fully support use as Warmwater Habitat
5. Classified for High Ecological Value in Antidegradation Policy/
   Ky. Exceptional Water
   • 6 of the 7 Kentucky Outstanding State Resource Waters

The criterion that classifies the largest number of streams as Regionally Significant is attainment of designated use as warmwater habitat – which applies to 15 streams or stream segments, including the 7 Outstanding State Resource Waters. Kentucky’s Integrated Report identifies the uses that streams support and do not support. The last criterion recognizes streams with high ecological value that are classified as Kentucky Exceptional Water. This category includes 6 of the streams designated as Outstanding State Resc Waters but doesn’t include the Licking River segment below SR536. Fully supports its aquatic habitat designation but not an OSRW or EW: Cruises Creek, Big Bone Cr and trib Mudlick Cr, Twelvemile Cr and trib Brush Cr, Fourmile Cr, Pleasant Run Cr

Q2-1 Do you have any questions you’d like to ask about these resources?

Slide  STATE UPDATE ON THE LICKING RIVER AND HIGH-QUALITY TRIBUTARIES
Brooke Shireman, Environmental Technologist, Watershed Management Branch of the Kentucky Division of Water

Slide  Part 3 - ENVIRONMENTAL CONSULTATIONS  IDEAL: 2:00 START, 2:30 FINISH
STATE ENVIRONMENTAL PROTECTION STRATEGIES
Any questions for Brooke? States help protect our Regionally Significant resources. Staff from state agencies have graciously agreed to improve our understanding of how some state programs and policies apply to local resources.

Slide  Kentucky Integrated Report and Classifications for High-Quality Waters
Randy Payne, Environmental Scientist, Water Quality Branch of the Kentucky Division of Water

Slide  Kentucky’s Wildlife Conservation Strategy
Sunni Carr, Wildlife Diversity Program Coordinator, Kentucky Department of Fish and Wildlife Resources

Slide  State Strategies - Discussion Question 1
• How might these programs or policies – or the data they contain – be used in local efforts to protect environmental resources?

Thank you all for the explanations and information you’ve provided. We have two questions – for the panel or anyone who might want to comment – and then we’ll open this to your questions.

Q3-1 Do you have any suggestions about how these programs or policies – or the data they contain – might be used in local efforts to protect environmental resources?

... Any suggestions for how local planning, stormwater management, parks, or conservation agencies could use these documents or data?

... For example, could data on the ecological value of local resources (designation as Kentucky Outstanding State Resource Water, sub-watershed priority areas for mussel conservation) be
used to influence zoning policy ... or require best management practices ... or target conservation practices?

**Slide**  *State Strategies - Discussion Question 2*
- How might local agencies influence the state’s development or use of these programs or policies?

**Q3-2**  • Do you have any suggestions for how local agencies might influence the state’s development or use of these programs or policies?
  ... *For example, are there opportunities for local agencies to provide information or perspective?*
  ... *Are there ways for local agencies to help state programs or policies be more effective?*
  ... *For example, can local agencies influence the requirements or use of stream buffers ... or which streams are classified as Outstanding State Resource Waters ... or provide input on permit requirements or reviews?*

**Q3-3**  • Are there any other questions for the panel?

**Slide**  *PART 4- ENVIRONMENTAL CONSULTATIONS*

**DISCUSSION: STRATEGIES FOR AVOIDING ENVIRONMENTAL IMPACTS**

This part of the discussion builds on what we learned from the previous consultations. To follow this, you’re going to need the last piece in your packet.

**Slide**  *Previous Consultations – Discussion Framework*

• Separate state and local sessions
  • Focus 1) *How environmental resources can be adversely affected* 2) *How adverse effects can be avoided*
  
  **Concerns**
  • Primary Impacts from roadway runoff and project construction
  • Secondary Impacts from development and impervious surface facilitated by improved roadways

We previously consulted *separately* with state agencies (*in 2009*) and local agencies (*2010 and 2011*) about how environmental resources can be adversely affected by the transportation plan – and *how* adverse effects can be avoided. The environmental effects of concern included both Primary impacts – from roadway runoff and project construction – and secondary impacts – from development and impervious surface facilitated by improved roadways.  *10 state agency divisions, 34 local agencies participated*

**Slide**  *Previous Consultations – Major Environmental Concerns*

*Major concerns are that...*
  • forested tracts remain intact,
  • stream corridors be conserved,
  • roadway runoff be diverted from direct entry into streams,
  • streams not yet degraded be protected, and
  • the growth of impervious surface be constrained
Here’s what we heard from state agencies as major concerns about environmental impacts. Local agencies discussed how these concerns are addressed in their counties. They indicated that -- in general -- local processes for guiding development and managing stormwater...

- are not used to conserve forested area,
- commonly allow streams to be infilled or piped,
- commonly use curb-and-gutter systems that discharge roadway runoff directly to streams,
- do not differentiate for stream conditions, and
- are not effective for reducing roadway width, parking lot size, and other impervious surfaces.

Local agencies are working to improve environmental protection, but it’s an uphill job.

Slide  **Previous Consultations – Suggested/Discussed Strategies**

Suggested by state agencies and discussed by local agencies for their potential for greater use:

- Low-impact development (LID) and green infrastructure for managing stormwater
- Integration of best practices into local code
- Conservation elements in local plans
- Conservation easements
- Watershed planning

These are strategies suggested by state agencies as having the potential to help address their concerns, if they were used more widely at the local level. Local agencies discussed their efforts to expand or strengthen these strategies, and the many obstacles that confront them. Your packet includes a summary of that discussion. The full report’s on OKI’s website.

Slide  **Potential Avoidance Strategies - Discussion Question 1**

Retain forested tracts
Conserve stream corridors (maintain corridor connectivity)
Divert roadway runoff from direct entry into streams
Protect streams not yet degraded
Constrain the growth of impervious surface

- If you were to focus on one of these for Dearborn County – as the goal most feasible to achieve -- which would it be?

Q4-1  This list shows the major concerns re-phrased into action items that we want you to give us feedback about.

- If you were to focus on one of these for Northern Kentucky – as the goal most feasible to achieve -- which would it be?

... Another way of looking at this might be: In areas where these goals aren’t yet precluded by development, which might have the greatest chance for success?

Slide  **Potential Avoidance Strategies - Discussion Question 2**

Retain forested tracts
Conserve stream corridors (maintain corridor connectivity)
Divert roadway runoff from direct entry into streams
Protect streams not yet degraded
Constrain the growth of impervious surface
What strategies offer the greatest potential to address these concerns?
Are there jurisdiction or agency programs that could serve as models?

Q4-2 Numerous strategies are already in place for protecting environmental resources – for example, requirements or incentives for development or stormwater practices, and the establishment of parks and easements.

- What do you think are the best strategies for addressing the concerns listed here? (... In other words, what strategies do you think are most effective, or potentially most effective?)
- What do you think about stream buffers – do they offer much potential? (curious because one of the Ohio counties is using stream buffers very effectively)
- Can you suggest strategies that are good examples or models?

Slide Potential Avoidance Strategies - Discussion Question 3
- Retain forested tracts
- Conserve stream corridors (maintain corridor connectivity)
- Divert roadway runoff from direct entry into streams
- Protect streams not yet degraded
- Constrain the growth of impervious surface
  - How can harmful practices be reduced? (for example, stream piping and infill, tree clearance, stream-edge development, curb-and-gutter direct discharges)

Q4-3 Some conventional development practices run counter to ... or work against ... the concerns listed here -- practices like stream piping, tree clearance, stream-edge development, and curb-and-gutter direct discharges. flood plain development

- Any thoughts on how harmful practices can be reduced?
- How can practices that aggravate these concerns be changed?
- Do you know of successful efforts to replace these practices?

Slide Potential Avoidance Strategies - Discussion Question 4
- Retain forested tracts
- Conserve stream corridors (maintain corridor connectivity)
- Divert roadway runoff from direct entry into streams
- Protect streams not yet degraded
- Constrain the growth of impervious surface
  - What state-level initiatives could facilitate change in local strategies ... or increase use of effective strategies?

Q4-4 Previous consultations made it clear that change is difficult. The challenge of addressing the issues listed here is not just to identify effective strategies, but to implement them. Federal and state initiatives can be the carrot or the stick for change – such as federal policy for stormwater management, or state 319 programs for watershed planning.

- Can you suggest state-level initiatives that might facilitate change in local strategies – or that could expand implementation of effective strategies?
- What might be done at a state level to result in greater use of local strategies like conservation easements, stream buffers, or low-impact development ... curb-and-gutter alternatives? appropriate road sizing?
Slide  Potential Avoidance Strategies - Discussion Question 5
Retain forested tracts
Conserve stream corridors (maintain corridor connectivity)
Divert roadway runoff from direct entry into streams
Protect streams not yet degraded
Constrain the growth of impervious surface
• How could OKI better support local efforts to conserve or protect environmental resources?

Q4-5 Since the previous consultations, OKI has expanded mapping, revised project selection criteria, and applied for grants to improve planning for environmental resources.
• Do you have suggestions for how OKI could better support local efforts to conserve or protect environmental resources?
Revised scoring criteria for recommending projects to the transportation plan to award 5 points for avoiding impacts to regionally significant resource and 3 points for mitigating impacts (for projects with an impacts but that mitigate the impact; no points for projects with impacts that are not mitigated)

Slide  Potential Avoidance Strategies - Discussion Question 6
Retain forested tracts
Conserve stream corridors (maintain corridor connectivity)
Divert roadway runoff from direct entry into streams
Protect streams not yet degraded
Constrain the growth of impervious surface
• Should other concerns be added?
• Do you have additional comments on strategies for avoiding environmental impacts?

Q4-6 The list of concerns used for today’s discussion indicates major challenges to be met – or needs to be addressed – for protecting Regionally Significant Environmental Resources.
• Are there other concerns that should be included?
  (For example, since Prime Farmland’s been added to the consultations map, does the list of concerns here need to be modified?)
• Do you have additional comments on strategies for avoiding impacts – or comments on today’s discussion – before we move on to transportation projects?
FINISH BY 3:30 optimal

Slide  PART 5- ENVIRONMENTAL CONSULTATIONS
DISCUSSION: PROPOSED TRANSPORTATION PROJECTS AND THEIR ENVIRONMENTAL EFFECTS
The maps on the table are for comparing Regionally Significant Environmental Resources and transportation projects. There are 2 regional maps—the 1 described earlier, & a separate map for Prime Farmland.

Slide  County-Level Map
Same Regionally Significant Environmental Resources as regional map and additions:
• Watershed boundaries (HUC-12)
• **Expanded State Conserved Areas** to include local Parks and Preserves over 100 acres
• **Other Greenspace** (smaller Parks and Preserves and Greenspace-Related uses)
• **Prime Forestland** (over 100 acres large crown canopy)
• **Proposed transportation projects**

The county-level map shows the same environmental resources as the regional map -- and some additional information. The additions are:
- watershed boundaries for HUC-12 watersheds
- an expanded category of State Conserved Areas that includes local Parks and Preserves over 100 acres
- a green pattern called “Other Greenspace” that shows smaller local parks & greenspace-related uses -- such as golf courses, cemeteries, & camps
- a tan grid pattern called “Prime Forestland” that indicates large tracts of large crown canopy over 100 acres

If you see something that should be changed, then we’d appreciate your marking it on the map or letting us know after the meeting.

**Slide**  **Proposed Transportation Projects**
Projects shown in pink
- Proposed by local jurisdictions to meet local needs
- Proposed to be recommended in regional transportation plan based on modeling, public review, and a scoring process
- If recommended in adopted plan, then eligible for federal funding
- Consult comments used to inform public meetings & OKI Bd prior to plan adoption

Transportation projects on the maps have codes that are listed in Table 5 in your packet. The dark colored projects have funds already committed. Projects that are pink have been proposed by local jurisdictions as meeting local needs based on local planning. They’re now proposed for recommendation in the regional plan based on modeling, public review and comment, and a numerical scoring process. Once projects are recommended in an adopted regional plan, then they’re eligible for federal funding. Discussion from Consultations will be included in comments that go to public meetings (mid-April), a public hearing (early May), and an environmental review provided to OKI’s Board prior to action on plan adoption (June).

**Slide**  **Transportation Project Categories**
Projects expand transportation capacity
- **Dashed line**
  New roadway
- **Solid line**
  Expanded or improved roadway
- **Bullet point**
  Improvement to interchange (or non-roadway)

Projects on the map all expand transportation capacity. The dashed line indicates new roadway. The solid line indicates lane additions or major reconstruction. Bullet points indicate interchange improvements or -- if they’re in pink/proposed – can also be improvements to bike, freight, or transit facilities.
**Comparison Question 1**
Do you have comments or concerns about the environmental effects or impacts of the proposed transportation plan or individual projects?

**Q5-1**
Do you have comments or concerns about the environmental effects or impacts of the proposed transportation plan or individual projects?

**Comparison Question 2**
Any suggestions for how the impacts of any individual project could be avoided – or how its impacts could be reduced by state or local efforts?

**Q5-2**
Any suggestions for how any individual project’s impacts could be avoided – or reduced – by state or local efforts? ... any suggestions for managing the runoff from any of these projects?

**Comparison Question 3**
Are there projects that provide opportunity for enhancing or restoring environmental resources?

**Q5-3**
Are there projects that provide opportunity for enhancing or restoring environmental resources? ... Such as opportunity for expanding forested area ... or for stream day-lighting ... or wider stream buffers?

**Comparison Question 4**
Are there any other comments you have on transportation projects or environmental resources?

**Q5-4**
As a final question, are there any other comments you have on transportation projects or environmental resources?

All of us at OKI want to thank you for coming today and contributing to this discussion. We really appreciate your giving us your time -- and your ideas. We’ll be reporting back to you on the results....
Indiana Session
2012 Environmental Consultations
March 5, 1:00-3:30

**Slide** PART 1 - ENVIRONMENTAL CONSULTATIONS
INTRODUCTION TO CONSULTATIONS AND REGIONALLY SIGNIFICANT ENVIRONMENTAL RESOURCES

Unscripted Welcome and Self-introductions

**Slide** Intended Results of Environmental Consultations
- Better decisions for improving transportation
- Better decisions about how development occurs
- Transportation improvements and a development process that more fully account for their environmental effects and financial consequences

Today’s session is different from previous consultations but the purpose is the same -- to result in better decisions for improving transportation and how development occurs. Consultations have become part of regional transportation planning to help reduce negative and costly environmental impacts. They involve considering options to avoid impacts instead of mitigate for them -- and options to maintain resources already targeted for conservation, as development expands. We hope you welcome this opportunity – as we do – to consider the potential for change. Today’s session focuses first on local resources and then on options to better protect them.

**Slide** Categories of Regionally Significant Environmental Resources
- Regionally Significant Streams
- State Conserved Areas
- Wetlands
- Endangered, Threatened, or Rare Species
- Prime Farmland and Agricultural Districts

These are the categories that we call Regionally Significant Environmental Resources. They’re also listed in table 1 of your packet. These are mostly high-quality or rare resources – or help to sustain other high-quality or rare resources. They can involve mitigation. We identified the local resources in these categories from state conservation plans, policies, maps, or inventories. We add more categories in the future from state historic resource inventories, statewide forest assessments, and other state data sources.

**Slide** Map Layer-The Developed Area
This is the base layer of the map to be used later on for the comparing Regionally Significant Environmental Resources with transportation projects. The grey shows the Developed Area, which represents transportation’s effects on land-use and major public investment to support development. These next slides feature the resource categories.
**Slide**  Map Layer Addition-Regionally Significant Streams
Regionally Significant Streams are in dark blue. These include river segments with the highest value for aquatic habitat -- and streams that are relatively unimpaired. Most of the least-impaired streams are outside of the Developed Area.

**Slide**  Map Layer Addition-State Conserved Areas and Wetlands
The category of State Conserved Areas is represented by green. These are state parks, state wildlife areas, and state preserves – listed in Table 2 of your packet. Dearborn County has a 62-acres state preserve, -- it’s not shown because it lacks public access. The wetlands category isn't shown on this map -- except for a symbol for The Oxbow which doesn’t show here. Most wetlands in the OKI Region are less than 2 acres -- many of the larger ones are in State Conserved Areas or local parks. Nationwide, wetlands are sole habitat for more than a third of threatened and endangered species, which partly explains why wetland size does not affect requirements for mitigation.

**Slide**  Pictures & Text-Endangered, Threatened, and Rare Species
▪ 165 local species are listed at federal or state levels as Endangered, Threatened, or Rare (20 of these are also federally listed)
▪ Nearly 2/3 of the 104 animal species depend on aquatic habitat for survival
▪ Nearly half of the aquatic species are “critically imperiled” or “imperiled” globally

Endangered, Threatened, and Rare Species occurrences aren’t mapped, either, but Table 3 in your packet identifies 165 local species -- by county -- that are listed at state or federal levels as Endangered, Threatened, or Rare. Nearly two thirds of the animal species depend on aquatic habitat -- Nearly half of these are “critically imperiled” or “imperiled” at global levels. Their habitat includes areas identified as Regionally Significant Streams, State Conserved Area, and Wetlands.

**Slide**  Map Layer Addition-Prime Farmland & Agricultural Districts
The category of Prime Farmland & Agricultural Districts was added after the last consultations. The map shows three farmland categories where federally-funded projects are subject mitigation requirements. Projects that avoid the need for mitigation also help conserve some of the world’s most productive soils. Agricultural Districts are on the map but aren’t established in Indiana.

**Slide**  Categories of Regionally Significant Environmental Resources
- Regionally Significant Streams
- State Conserved Areas
- Wetlands
- Endangered, Threatened, or Rare Species
- Prime Farmland and Agricultural Districts

Q1-1 Do you have any comments or questions about these resources before we move on?
Regionally Significant Streams

Streams that meet any of these criteria:
- Designated as a Scenic River
- Identified as a Priority Area for Conserving Wildlife Species
- Designated for a High Level of Aquatic Life Use
- Reported as Attaining its Aquatic Life Use Designation
- Classified for High Ecological Value in Antidegradation Policy

Regionally Significant refers to any river or stream that meets any of these five criteria, which are based on state data. You may want to refer to Table 4 – which shows information for Indiana in purple/pink.

Criteria for Identifying Regionally Significant Streams

1. Designated as Scenic River
2. Identified as Priority Area for Conserving Aquatic Wildlife
   - Whitewater River: based on addressing critical needs for 1) habitat for diverse and rare species and 2) connectivity
3. Designated for a High Level of Aquatic Life Use (Outstanding State Resource Water)

Of these three criteria, one served to classify one Dearborn County stream as Regionally Significant. That would be the Whitewater River's identify as a Priority Area for Conserving Wildlife, based on the state wildlife strategy. The State Strategy doesn’t identify the Whitewater -- or any other stream -- as a priority area, but it discusses conservation needs. The Whitewater River is listed here for addressing the needs for habitat for diverse and rare species, and for connectivity for wildlife movement and migration. As for the other two criteria, the region's only Scenic River is the Little Miami River in Ohio, and the Designation for a high level of aquatic life use would be designation as Outstanding State Resource Water, which doesn’t apply to any Dearborn County stream. designation for waters that have unique or special ecological, recreational, or aesthetic significance.

Criteria for Identifying Regionally Significant Streams

4. Reported as Attaining its Aquatic Life Use Designation
   - Great Miami River (in Dearborn County)
   - Doublelick Run
   - Whitewater River south of Logan Creek
   - Tributaries (see map/table)
   - Ohio River (in Indiana)
   - Laughery Creek west of Hayes Branch
   - Tributary stream in Caesar Creek Township
   - North Hogan Creek segment
Tanners Creek segment
5. Classified for High Ecological Value in Antidegradation Policy
The major criteria that classified Dearborn County streams as Regionally Significant -- as indicated here -- was attainment of designated use as warmwater habitat -- based on Indiana’s 2010 Integrated Report. The fifth criteria -- high ecological value – would be Outstanding State Resource Water. Dearborn County doesn’t have any of these, but the Whitewater River may be a good candidate. State code contains a process for requesting this designation for streams with unique or special ecological, recreational, or aesthetic significance. designation as OSRW by the Water Pollution Control Board (Title 13, Article 18, Chapter 3)

Slide Three Dearborn County Environmental Resources
Laughery Creek
Whitewater River
The Oxbow
I'd like to shift the focus, now, to these three resources and ask you to clarify our understanding.

Slide Laughery Creek
1) Attains its designated used as warmwater habitat above Hayes Branch
2) Listed as a potential candidate for the National Scenic Rivers Program based on “outstandingly remarkable” natural values of more than local or regional significance
3) Included in the Outstanding Rivers List of Indiana that recognizes the exceptional natural conditions of a stream corridor
4) Has a more forested and less developed watershed than many streams
What we know about Laughery Creek that suggests its environmental value is this. It attains its designated use as warmwater habitat for about a third of its length in Dearborn County. It’s one of three streams in the OKI Region -- and one of about 2% of streams nationwide – that’s listed in the Nationwide Rivers Inventory as a potential candidate for the National Wild and Scenic Rivers System. The Inventory was developed in 1982 but remains posted on the National Park Service website. Federal agencies are required to take care to avoid or mitigate adverse effects on these rivers and to consult with the National Park Service before taking actions that could foreclose their candidacy. foreclose their wild, scenic, or recreational status as part of normal planning and environmental review processes
Another thing about Laughery Creek is its inclusion on the Outstanding Rivers List of Indiana -- developed by ODNR to identify stream corridors with exceptional natural conditions. As we understand it, the Indiana Dept. of Transportation uses the Outstanding Rivers List to involve IDNR in project reviews and mitigation, but the list is not used for regulatory purposes. last update 1997? Lastly, Laughery Creek’s watershed is more forested and less developed than most watersheds in our Region, so there is greater potential for protection. Some of you have been involved in a 319 grant to assess conditions and promote conservation in the South Laughery Creek Watershed - 80 miles (12 or 15 miles in Drbn Co) – 7 miles=embayment of Ohio River

Slide Whitewater River
Indiana segment
- Included in the Outstanding Rivers List of Indiana
- Fully supports its designated use as warmwater habitat below Logan Creek (mainstem and several tributaries)
- Supports wildlife diversity and rare species

**Ohio segment**
- Classified as Exceptional Warmwater habitat
- Fully supports its designated use as Exceptional Warmwater habitat (mainstem)
- Designated as Superior High Quality Water (based on ecological value)

The Whitewater River is divided between Indiana and Ohio. It is the “other” stream in Dearborn County on Indiana’s Outstanding Rivers List for exceptionally natural stream corridors. The Dearborn County part of the Whitewater River fully supports its designated use as warmwater habitat in the mainstem below Logan Creek, and so do nine tributaries -- and it provides habitat for diverse and rare species. 2 state endangered species: variegated darter, cobblestone tiger beetle – 05 fisheries study: species diversity is above average compared to other major streams in Indiana

The Ohio segment of the Whitewater River is designated as Exceptional Warm Water habitat – meaning that it’s capable of supporting endangered and rare species – and the mainstem attains that use. Based on Ohio’s 2010 Integrated Report Ohio antidegradation policy classifies the Whitewater as Superior High Quality Water in its. (35% reserved capacity, not 70%) Ohio has not designated the Whitewater as a conservation priority, however, because that designation would be inappropriate unless the upstream areas in Indiana were also targeted for conservation.

**Slide**  **Dearborn County Streams: Discussion Question 1**
How well have Laughery Creek and the Whitewater River maintained their environmental qualities?

**Q2-1** Our impression of these streams is partly based on old data. We assume that conditions have changed in the past thirty years -- and you know more about these streams than we do.
- How well do you think Laughery Creek and the Whitewater River have maintained their environmental qualities?
  ... How do you view the value of these streams?

**Slide**  **Dearborn County Streams: Discussion Question 2**
Could Dearborn County have more rare species than data indicates?

**Q2-2** It’s our understanding that Dearborn County has unaltered stream segments protected by steep ravines, that biological assessments and chemical monitoring can produce different results, and that only one fish and one mussel species are listed for Dearborn County.
- We’d like to think that more rare species inhabit Dearborn County than data indicates, but is that likely?
  ... Could there be additional species to add to the current list?
  ... Did Dearborn County streams have mussel species that have been extirpated? (Do streams that once had mussel beds have the potential to support mussels in the future?)

**Q2-3** Do you have questions or comments before we shift to the Oxbow?
The Oxbow

1) Includes 2500 acres of Ohio River bottomlands and floodplains
2) Partly conserved by Oxbow, Inc.
3) Important for bird migration
4) Important for species diversity and rarity (wildlife and plant life)
5) “The potential to recreate the Oxbow is virtually nonexistent.”

The Oxbow wetlands is another Dearborn County resource divided between Indiana and Ohio. It includes 2500 acres of Ohio River bottomlands and floodplains Ind WtInd Cnservation Pln. A thousand acres are in Ohio – most of it conserved by the Hamilton County Park District. 1500 acres are in Dearborn County -- about two thirds of this is conserved, mostly by a nonprofit organization called Oxbow, Inc. Div of Fish and Wildlife owns a 7 or 8-acre tract Oxbow owns 940 acres 63%, has 230/15% in easements = 1170/78% The Oxbow group – which is described in Indiana’s Wetland Conservation Plan for its early efforts -- has documented the Oxbow’s value to wildlife. The site’s importance for bird migration is tied to its location and its use as farmland. 283 species of birds have been reported – more than at many National Wildlife Refuges – and 66 species of fish. It’s not just the variety of species and numbers of birds that distinguish this area, but also the rarity of species for which occurrences and sightings are reported. Another perspective on the Oxbow’s importance, as mentioned by a participant in previous consultations, is that the potential to recreate the Oxbow is virtually nonexistent.

Slide The Oxbow: Discussion Question 1

How should the Oxbow be protected from development impacts?

Q2-4 A lot of the Oxbow has been conserved, but conservation alone may not be enough to protect its wildlife functions and value.

• How should the Oxbow be protected from development impacts?
  Is there a need to protect it from roadway runoff (roadsalt & contaminants)? Could permits for drainage and culverts change wetland flows? What about pumping for water supply?

Slide The Oxbow: Discussion Question 2

How can the Oxbow benefit from mitigation?

Q2-5 Comments from previous consultations were that the value of restored wetland is not the same as an intact system, and that restoration is more expensive than conservation. It’s our understanding that mitigation projects are used more to create or restore wetlands than to conserve or enhance them.

• How can the Oxbow benefit from mitigation?
  404 permit from Corps to fill wetlands, then 401 certification by state to certify consistency with water quality standards

Q2-6 Do you have any questions or comments before we move to the next section?

Slide PART 3 - ENVIRONMENTAL CONSULTATIONS

STATE ENVIRONMENTAL PROTECTION STRATEGIES 30-45 min
States help protect local resources classified as Regionally Significant. Staff from state agencies have graciously agreed to improve our understanding of how some state programs and policies apply to local resources.

Slide **Indiana Natural Heritage Program and Database**
Cloyce Hedge, Natural Heritage Program Coordinator, IDNR Division of Nature Preserves

Slide **The State Wildlife Action Plan**
Julie Kempf, Grants Coordinator, IDNR Division of Fish and Wildlife

Slide **Indiana Integrated Report**

Slide **Indiana Wetlands Permitting**
Aaron McMahan, Wetlands Project Manager, IDEM Office of Water Quality, Wetlands and Storm Water Section

Slide **State Strategies - Discussion Question 1**
- How might these programs or policies – or the data they contain – be used in local efforts to protect environmental resources?

Thank you all for the explanations and information you’ve provided. We have two questions – for the panel or anyone who might want to comment – and then we’ll open this to your questions.

**Q3-1** • Do you have any suggestions about how these programs or policies – or the data they contain – might be used in local efforts to protect environmental resources?

... Any suggestions for how local planning, stormwater management, parks, or conservation agencies could use these documents or data?

... For example, could data on the ecological value of local resources (assessment categories in Integrated Report, data on rare species) be used to influence zoning policy ... or strengthen stream buffer requirements ... or to target conservation practices?

**Slide** **State Strategies - Discussion Question 2**
- How might local agencies influence the state’s development or use of these programs or policies?

**Q3-2** • Do you have any suggestions for how local agencies might influence the state’s development or use of these programs or policies?

... For example, are there opportunities for local agencies to provide information or perspective?

... Are there ways for local agencies to help state programs or policies be more effective?

... For example, can local agencies influence state activities related to the Oxbow or Whitewater River – maybe advocate for inventories of aquatic species, or provide input on permit requirements or reviews?

**Q3-3** • Are there any other questions for the panel?

**Slide** **PART 4 - ENVIRONMENTAL CONSULTATIONS**
**DISCUSSION STRATEGIES FOR AVOIDING ENVIRONMENTAL IMPACTS** 60 min

For this next discussion, we’d like to build on what we learned from the previous consultations.
Slide  Previous Consultations – Discussion Framework
• Separate state and local sessions
• Focus 1) How environmental resources can be adversely affected 2) How adverse effects can be avoided

Concerns
• Primary Impacts from roadway runoff and project construction
• Secondary Impacts from development and impervious surface facilitated by improved roadways

We previously consulted separately with state agencies – in 2009 -- and local agencies – in 2010 and 2011 – about how environmental resources can be adversely affected by the transportation plan – and how adverse effects can be avoided. The environmental effects of concern included both Primary impacts – from roadway runoff and project construction – and secondary impacts – from development and impervious surface facilitated by improved roadways.

Slide  Previous Consultations – Major Environmental Concerns

Major concerns are that...
• forested tracts remain intact,
• stream corridors be conserved,
• roadway runoff be diverted from direct entry into streams,
• streams not yet degraded be protected, and
• the growth of impervious surface be constrained

Here’s what we heard from state agencies as major concerns about environmental impacts. Local agencies discussed how these concerns are addressed in their counties. They indicated that -- in general -- local processes for guiding development and managing stormwater...
• are not used to conserve forested area,
• commonly allow streams to be infilled or piped,
• commonly use curb-and-gutter systems that discharge roadway runoff directly to streams,
• do not differentiate for stream conditions, and
• are not effective for reducing roadway width, parking lot size, and other impervious surfaces.
Local agencies are working to improve environmental protection, but it’s an uphill job.

Slide  Previous Consultations – Suggested/Discussed Strategies

Suggested by state agencies and discussed by local agencies for their potential for greater use:
• Low-impact development (LID) and green infrastructure for managing stormwater
• Integration of best practices into local code
• Conservation elements in local plans
• Conservation easements
• Watershed planning

These are strategies suggested by state agencies as having the potential to help address their concerns, if they were used more widely at the local level. Local agencies discussed their efforts to expand or strengthen these strategies, and the many obstacles that confront them. Your packet includes a summary of that discussion. The full report’s on OKI’s website.
Slide  **Potential Avoidance Strategies - Discussion Question 1**
- Retain forested tracts
- Conserve stream corridors (maintain corridor connectivity)
- Divert roadway runoff from direct entry into streams
- Protect streams not yet degraded
- Constrain the growth of impervious surface
  - If you were to focus on one of these for Dearborn County – as the goal most feasible to achieve – which would it be?

**Q4-1** This list shows the major concerns re-phrased into action items that we want you to give us feedback about.
- If you were to focus on one of these for Dearborn County – as the goal most feasible to achieve -- which would it be?
  ... Another way of looking at this might be: In areas where these goals aren't yet precluded by development, which might have the greatest chance for success?

Slide  **Potential Avoidance Strategies - Discussion Question 2**
- Retain forested tracts
- Conserve stream corridors (maintain corridor connectivity)
- Divert roadway runoff from direct entry into streams
- Protect streams not yet degraded
- Constrain the growth of impervious surface
  - What are the best (most effective) strategies for addressing these concerns?

**Q4-2** Numerous strategies are already in place for protecting environmental resources – for example, requirements or incentives for development or stormwater practices, the establishment of parks and easements, and Indiana's Classified Forest program.
- What do you think are the best strategies for addressing the concerns listed here?
(... What strategies do you think are most effective, or potentially most effective?)
(... Can you suggest good examples or models?)

Slide  **Potential Avoidance Strategies - Discussion Question 3**
- Retain forested tracts
- Conserve stream corridors (maintain corridor connectivity)
- Divert roadway runoff from direct entry into streams
- Protect streams not yet degraded
- Constrain the growth of impervious surface
  - How can harmful practices be reduced? (for example, stream piping and infill, tree clearance, stream-edge development, curb-and-gutter direct discharges)

**Q4-3** Some conventional development practices run counter to ... or work against ... the concerns listed here -- practices like stream piping, tree clearance, stream-edge development, and curb-and-gutter direct discharges. *flood plain development*
- Any thoughts on how harmful practices can be reduced?
(... How can practices that aggravate these concerns be changed?)
(... Do you know of successful efforts to replace these practices?)
Slide  Potential Avoidance Strategies - Discussion Question 4
Retain forested tracts
Conserve stream corridors (maintain corridor connectivity)
Divert roadway runoff from direct entry into streams
Protect streams not yet degraded
Constrain the growth of impervious surface
• What state-level initiatives could facilitate change in local strategies ... or increase use of effective strategies?

Q4-4 Previous consultations made it clear that change is difficult. The challenge of addressing the issues listed here is not just to identify effective strategies, but to implement them. Federal and state initiatives can be the carrot or the stick for change – such as federal policy for stormwater management, or state 319 programs for watershed planning.
• Can you suggest state-level initiatives that might facilitate change in local strategies – or that could expand implementation of effective strategies?
... What might be done at a state level to result in greater use of local strategies like conservation easements, stream buffers, or low-impact development ... curb-and-gutter alternatives? appropriate road sizing?

Slide  Potential Avoidance Strategies - Discussion Question 5
Retain forested tracts
Conserve stream corridors (maintain corridor connectivity)
Divert roadway runoff from direct entry into streams
Protect streams not yet degraded
Constrain the growth of impervious surface
• How could OKI better support local efforts to conserve or protect environmental resources?

Q4-5 Since the previous consultations, OKI has expanded mapping, revised project selection criteria, and applied for grants to improve planning for environmental resources.
• Do you have suggestions for how OKI could better support local efforts to conserve or protect environmental resources?
Revised scoring criteria for recommending projects to the transportation plan to award 5 points for avoiding impacts to regionally significant resource and 3 points for mitigating impacts (for projects with an impacts but that mitigate the impact; no points for projects with impacts that are not mitigated)

Slide  Potential Avoidance Strategies - Discussion Question 6
Retain forested tracts
Conserve stream corridors (maintain corridor connectivity)
Divert roadway runoff from direct entry into streams
Protect streams not yet degraded
Constrain the growth of impervious surface
• Should other concerns be added?
• Do you have additional comments on strategies for avoiding environmental impacts?
Q4-6 The list of concerns used for today’s discussion indicates major challenges to be met – or needs to be addressed – for protecting Regionally Significant Environmental Resources.

- Are there other concerns that should be included?
  (For example, since Prime Farmland has been added to the consultations map, does the list of concerns here need to be modified?)
- Do you have additional comments on strategies for avoiding impacts – or today’s discussion – before we move on to transportation projects?

**Slide** PART 5- ENVIRONMENTAL CONSULTATIONS

**PROPOSED TRANSPORTATION PROJECTS AND THEIR ENVIRONMENTAL EFFECTS - DISCUSSION**

The maps on the table are for comparing Regionally Significant Environmental Resources and transportation projects. There are two regional maps – the one described earlier, and a separate map for Prime Farmland.

**Slide** County-Level Maps

- Same as regional map with additions:
  - Watershed boundaries (HUC-12)
  - Expanded State Conserved Areas to include local Parks and Preserves over 100 acres
  - Other Greenspace (smaller Parks and Preserves and Greenspace-Related uses)

The county map shows the same environmental resources as the regional map -- and some additional information. The additions are
- watershed boundaries for HUC-12 watersheds
- an expanded category of State Conserved Areas that includes local Parks and Preserves over 100 acres
- a green pattern called “Other Greenspace” that shows smaller local parks & greenspace-related uses -- such as golf courses, cemeteries, & camps.

If you see something that should be changed, then we’d appreciate your marking it on the map or letting us know after the meeting.

**Slide** Proposed Transportation Projects

Projects shown in pink

- Proposed by local jurisdictions to meet local needs
- Proposed to be recommended in regional transportation plan based on modeling, public review, and a scoring process
- If recommended in adopted plan, then eligible for federal funding
- Consultation comments used to inform public meetings and OKI Board prior to plan adoption

Transportation projects on the maps have codes that are listed in Table 5 in your packet. Projects that are pink on the map have been proposed by local jurisdictions as meeting local needs based on local planning. They’re now proposed for recommendation in the regional plan based on modeling, public review and comment, and a numerical scoring process. Once projects are recommended in an adopted regional plan, then they’re eligible for federal funding. The results of today’s discussion will be included in comments that go to public meetings (mid-April), a
public hearing (early May), and an environmental review provided to OKI’s Board prior to action on plan adoption (June).

**Slide**  
**Transportation Project Categories**  
Projects expand transportation capacity  
- Scheduled Transportation Improvement (dark color)  
- Proposed Transportation Improvement (pink)  
  - New roadway, Expanded or improved roadway

Projects on the map all expand transportation capacity. The regional map has projects in a dark color that’s not shown on the Dearborn County map – these are projects for which funds are already committed. For Dearborn County, the map shows three proposed projects. The dashed line indicates new roadway. The solid line indicates lane additions.

**Slide**  
**Comparison Question 1**  
Do you have comments or concerns about the environmental effects or impacts of the proposed transportation plan or individual projects?

**Q5-1** Do you have comments or concerns about the environmental effects or impacts of the proposed transportation plan or individual projects?

**Slide**  
**Comparison Question 2**  
Any suggestions for how the impacts of any individual project could be avoided – or how its impacts could be reduced by state or local efforts?

**Q5-2** Any suggestions for how any individual project’s impacts could be avoided – or reduced – by state or local efforts?

**Slide**  
**Comparison Question 3**  
Are there projects that provide opportunity for enhancing or restoring environmental resources?

**Q5-3** Do any projects provide opportunity for enhancing or restoring environmental resources?  
... Such as opportunity for expanding forested area ... or stream day-lighting ... or wider stream buffers?

**Slide**  
**Comparison Question 4**  
Are there any other comments you have on transportation projects or environmental resources?

**Q5-4** As a final question for today’s session, are there any other comments you have on transportation projects or environmental resources?

All of us at OKI want to thank you for coming today and contributing to this discussion. We will be reporting back to you on the results. ...
Appendix B

Data on Regionally Significant Environmental Resources
## Table 2. State Conserved Areas in the OKI Region

<table>
<thead>
<tr>
<th>Map Code</th>
<th>Facility Name</th>
<th>County</th>
<th>Acres</th>
<th>Note</th>
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<tr>
<td>NP1</td>
<td>Hueston Woods State Nature Preserve</td>
<td>Butler</td>
<td>29</td>
<td>Within a state park</td>
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<tr>
<td>NP2</td>
<td>Sharon Woods Gorge</td>
<td>Hamilton</td>
<td>21</td>
<td>Within a county park</td>
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<tr>
<td>NP3</td>
<td>Caesar Creek Gorge State Nature Preserve</td>
<td>Warren</td>
<td>483</td>
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<tr>
<td>NP4</td>
<td>Halls Creek Woods State Nature Preserve</td>
<td>Warren</td>
<td>278</td>
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<tr>
<td>NP5</td>
<td>Crooked Run ... Sanctuary</td>
<td>Clermont</td>
<td>78</td>
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</tr>
<tr>
<td>NP6</td>
<td>Boone County Cliffs State Nature Preserve</td>
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<td>NP7</td>
<td>Dinsmore Woods State Nature Preserve</td>
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<td>105</td>
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<td></td>
<td><strong>OKI Region</strong></td>
<td></td>
<td>1,069</td>
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</tr>
</tbody>
</table>

### Wildlife Areas / Wildlife Management Areas - preserves with hunting and fishing

| WA1      | Pater Wildlife Area                    | Butler   | 192   |                                                |
| WA2      | Spring Valley Wildlife Area            |          | 288   |                                                |
| WA3      | Caesar Creek Lake Wildlife Area        |          | 1,109 | Connected to a state park                     |
| WA4      | East Fork Wildlife Area                |          | 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 |                                                |

### State Parks

| SP1      | Hueston Woods State Park               | Butler   | 1,022 | Includes State Nature Preserve                 |
| SP2      | Caesar Creek State Park                | 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      | Big Bone Lick State Park               | Boone    | 512   |                                                |
|          | **OKI Region**                         |          | 17,286 |                                                |

\* Owned by Boone County Fiscal Court; dedicated to Kentucky state nature Preserves systems

\* 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/parks/default/tabid/726/Default.aspx](http://www.dnr.state.oh.us/parks/default/tabid/726/Default.aspx)
- KY [http://naturepreserves.ky.gov/naturepreserves/Pages/preserves.aspx](http://naturepreserves.ky.gov/naturepreserves/Pages/preserves.aspx)
- [http://www.kdfwr.state.ky.us/kfwis/wmaguide.asp?lid=600&NavPath=C100C154](http://www.kdfwr.state.ky.us/kfwis/wmaguide.asp?lid=600&NavPath=C100C154)
- [http://parks.ky.gov/](http://parks.ky.gov/)

<table>
<thead>
<tr>
<th>River and Streams</th>
<th>County</th>
<th>Total Stream Length</th>
<th>Designated as Scenic River</th>
<th>Identified as Priority Area for Conserving Aquatic Wildlife</th>
<th>Designated for a High Level of Aquatic Life Use</th>
<th>Reported as Attaining its Aquatic Life Use Designation</th>
<th>Classified for High Ecological Value in Antidegradation Policy</th>
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<tbody>
<tr>
<td><strong>Great Miami River</strong></td>
<td>Butler</td>
<td>170.3</td>
<td></td>
<td>#5 rank among 11 Ohio Focus Watersheds</td>
<td>Indiana Category 2 for Dearborn Co. part</td>
<td></td>
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<tr>
<td><strong>Big Cave Run</strong></td>
<td>Butler</td>
<td>2.9</td>
<td></td>
<td></td>
<td>Ohio Category 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cotton Run</strong></td>
<td>Butler</td>
<td></td>
<td></td>
<td></td>
<td>Ohio Category 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Doublelick Run</strong></td>
<td>Dearborn, Hamilton</td>
<td>1.2</td>
<td></td>
<td></td>
<td>Indiana Category 2 for Dearborn Co. part</td>
<td></td>
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<tr>
<td><strong>Elk Creek</strong></td>
<td>Butler</td>
<td>12.6</td>
<td></td>
<td>Ohio Exceptional Warmwater Habitat</td>
<td></td>
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</tr>
<tr>
<td><strong>Four Mile Creek</strong></td>
<td>Butler</td>
<td>38.2</td>
<td></td>
<td>Ohio Exceptional Warmwater Habitat between RM 13/Darrtown Rd. &amp; RM 4/Sevenmile Ave</td>
<td></td>
<td></td>
<td>Proposed as Ohio Superior High Quality Water between RM 13.83/Curline Run &amp; RM 13.63/unnamed trib.</td>
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<tr>
<td><strong>Mutton Run</strong></td>
<td>Butler</td>
<td></td>
<td></td>
<td></td>
<td>Ohio Category 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ninemile Creek</strong></td>
<td>Butler</td>
<td>3.6</td>
<td></td>
<td></td>
<td>Ohio Category 1</td>
<td></td>
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</tr>
<tr>
<td><strong>Sevenmile Creek</strong></td>
<td>Butler</td>
<td>32.5</td>
<td></td>
<td>Ohio Exceptional Warmwater Habitat</td>
<td>Ohio Superior High Quality Water</td>
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<tr>
<td><strong>Twin Creek</strong></td>
<td>Warren</td>
<td>46.2</td>
<td></td>
<td>Ohio Exceptional Warmwater Habitat</td>
<td>Ohio Category 1</td>
<td></td>
<td>Ohio Outstanding State Water</td>
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<tr>
<td><strong>Licking River</strong></td>
<td>Campbell, Kenton</td>
<td></td>
<td>Mussels Conservation Area</td>
<td>Kentucky Outstanding State Resource Water 5. of RM 19/3/SR 536 bridge</td>
<td>Kentucky Category 2</td>
<td>Kentucky Exceptional Water</td>
<td>Kentucky Exceptional Water</td>
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<td><strong>Bowman Creek</strong></td>
<td>Kenton</td>
<td>6.0</td>
<td></td>
<td>Kentucky Outstanding State Resource Water</td>
<td>Kentucky Category 2</td>
<td>Kentucky Exceptional Water</td>
<td>Kentucky Exceptional Water</td>
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<tr>
<td><strong>Cruises Creek</strong></td>
<td>Kenton</td>
<td>8.6</td>
<td></td>
<td>Kentucky Outstanding State Resource Water</td>
<td>Kentucky Category 2</td>
<td></td>
<td>Kentucky Exceptional Water</td>
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<tr>
<td><strong>Sawyers Fork</strong></td>
<td>Kenton</td>
<td>3.3</td>
<td></td>
<td>Kentucky Outstanding State Resource Water</td>
<td>Kentucky Category 2</td>
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<td>Kentucky Exceptional Water</td>
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<tr>
<td><strong>Little Miami River</strong></td>
<td>Clermont, Hamilton, Warren</td>
<td>105.5</td>
<td>• National Scenic River N of Foster</td>
<td>#1 rank among 11 Ohio Focus Watersheds</td>
<td>Ohio Exceptional Warmwater Habitat upstream of RM 3.0/Beechmont Ave.</td>
<td>Ohio Category 1 for mainstem between Caesar Creek &amp; O'Bannon Creek</td>
<td>Ohio Outstanding State Water</td>
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<td><strong>Agins Run</strong></td>
<td>Warren</td>
<td>33.9</td>
<td>Lower 2 miles are included in the Little Miami River's designation</td>
<td>Ohio Exceptional Warmwater Habitat</td>
<td></td>
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<td>Ohio Superior High Quality Water</td>
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<tr>
<td><strong>Caesar Creek</strong></td>
<td>Warren</td>
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</table>
## Table 3. Regionally Significant Streams in the OKI Region

<table>
<thead>
<tr>
<th>River and Streams</th>
<th>County</th>
<th>Total Stream Length</th>
<th>Designated as Scenic River</th>
<th>Identified as Priority Area for Conserv Aquatic Wildlife</th>
<th>Designated for a High Level of Aquatic Life Use</th>
<th>Reported as Attaining its Aquatic Life Use Designation</th>
<th>Classified for High Ecological Value in Antidegradation Policy</th>
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</thead>
<tbody>
<tr>
<td>Dry Run (tributary to Turtle Creek)</td>
<td>Warren</td>
<td>1.3</td>
<td></td>
<td></td>
<td>Ohio Coldwater Habitat between hdwtr.s &amp; RM 1.2</td>
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<tr>
<td>East Fork</td>
<td>Clermont</td>
<td>81.7</td>
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<td></td>
<td>Ohio Exceptional Warmwater Habitat</td>
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<td>Hills Creek</td>
<td>Warren</td>
<td>4.1</td>
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<td>Ohio Exceptional Warmwater Habitat</td>
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<td>Homan Branch (tributary to Sharp Run, tributary to Lick Run)</td>
<td>Warren</td>
<td></td>
<td></td>
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<tr>
<td>Kunkers Run (tributary to Sugar Run)</td>
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<tr>
<td>Lick Run (tributary to Todd Fork)</td>
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<td>4.9</td>
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<td>Newman Run</td>
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<td>4.8</td>
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<td>Sharps Run (tributary to Lick Run)</td>
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<td>Sugar Run (tributary to Todd Fork)</td>
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<td>Todd Fork</td>
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<td>Whitakers Run (tributary to Todd Fork)</td>
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<td><strong>Ohio River</strong></td>
<td>Boone Campbell Clermont Dearborn Hamilton Kenton</td>
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<tr>
<td>Mussels Conservation Area east of the Licking River</td>
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<td>Big Bone Creek</td>
<td>Boone</td>
<td>10.7</td>
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<td>Kentucky Category 2 between RM 1.2 &amp; RM 10.7</td>
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<td>Brush Creek (tributary to Twelvemile Cr.)</td>
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<td>Fourmile Creek</td>
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<td>Laughery Creek</td>
<td>Dearborn</td>
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### Table 3. Regionally Significant Streams in the OKI Region

**OKI 2012 Environmental Consultations** (prepared September 2011)

<table>
<thead>
<tr>
<th>River and Streams</th>
<th>County</th>
<th>Total Stream Length</th>
<th>Designated as Scenic River¹</th>
<th>Identified as Priority Area for Conserving Aquatic Wildlife²</th>
<th>Designated for a High Level of Aquatic Life Use³</th>
<th>Reported as Attaining its Aquatic Life Use Designation⁴</th>
<th>Classified for High Ecological Value in Antidegradation Policy⁵</th>
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<tbody>
<tr>
<td>Little South Fork (tributary to Big South Fork)</td>
<td>Boone</td>
<td>5.9</td>
<td>Kentucky Outstanding State Resource Water between RM 1.2 and 5.9</td>
<td>Kentucky Category 2 between RM 1.2 and 5.9</td>
<td>Kentucky Exceptional Water between RM 1.2 &amp; RM 5.8</td>
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<tr>
<td>Mudlick Creek (tributary to Big Bone)</td>
<td>Boone</td>
<td>11.3</td>
<td>Kentucky Category 2 between RM 2 &amp; RM 6,1</td>
<td>Kentucky Category 2 between RM 2 &amp; RM 6,1</td>
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<td>North Hogan Creek</td>
<td>Dearborn</td>
<td>3.4</td>
<td>Kentucky Exceptional Water between RM 1.2 &amp; RM 5.9</td>
<td>Kentucky Exceptional Water between RM 1.2 &amp; RM 5.9</td>
<td>Kentucky Exceptional Water between RM 1.2 &amp; RM 5.9</td>
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<tr>
<td>Pleasant Run Creek</td>
<td>Kenton</td>
<td>3.4</td>
<td>Kentucky Category 2 between RM .2 &amp; RM 3.4</td>
<td>Kentucky Category 2 between RM .2 &amp; RM 3.4</td>
<td>Kentucky Exceptional Water between RM 1.2 &amp; RM 5.9</td>
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<td>Second Creek</td>
<td>Boone</td>
<td>2.9</td>
<td>Kentucky Outstanding State Resource Water between RM .2/ backwaters &amp; RM 2.7/headwaters</td>
<td>Kentucky Category 2 between RM .5 &amp; RM 2.9</td>
<td>Kentucky Exceptional Water between RM .4 &amp; RM 2.9</td>
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<td></td>
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<td>Tanners Creek</td>
<td>Dearborn</td>
<td></td>
<td>Indiana Category 2</td>
<td>Indiana Category 2</td>
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<td>Twelvemile Creek</td>
<td>Campbell</td>
<td>13.2</td>
<td>Kentucky Category 2 between RM 3.5 &amp; 9.0 and RM 10.4 &amp; 13.2</td>
<td>Kentucky Category 2 between RM 3.5 &amp; 9.0 and RM 10.4 &amp; 13.2</td>
<td>Kentucky Exceptional Water between RM 1.2 &amp; RM 5.8</td>
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<tr>
<td>Unnamed tributary to Laughery Creek in Caesar Creek Township</td>
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<td></td>
<td>Kentucky Category 2</td>
<td>Kentucky Category 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Whitewater River</strong> (trib. to Great Miami River)</td>
<td>Dearborn</td>
<td></td>
<td>Meets Indiana plan criteria for Priority Conservation Areas</td>
<td>Ohio Exceptional Warmwater Habitat</td>
<td>Ohio Category 1 for Hamilton Co. mainstem</td>
<td></td>
<td>Ohio Superior High Quality Water</td>
</tr>
<tr>
<td></td>
<td>Hamilton</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blue Creek (headwaters)</td>
<td>Dearborn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooper Run</td>
<td>Dearborn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crane Run</td>
<td>Dearborn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry Fork (trib. to Whitewater River)</td>
<td>Butler</td>
<td>19.6 in Ohio</td>
<td></td>
<td>Ohio Exceptional Warmwater Habitat</td>
<td>Ohio Category 1</td>
<td>Ohio Category 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dearborn</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hamilton</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Fox Run</td>
<td>Hamilton</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jamison Creek (tributary to Dry Fork)</td>
<td>Dearborn</td>
<td>6 in Ohio</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ohio Category 1</td>
</tr>
<tr>
<td></td>
<td>Hamilton</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lee Creek</td>
<td>Hamilton</td>
<td>6.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ohio Category 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Logan Creek</td>
<td>Dearborn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 3. Regionally Significant Streams in the OKI Region

<table>
<thead>
<tr>
<th>River and Streams</th>
<th>County</th>
<th>Total Stream Length</th>
<th>Designated as Scenic River</th>
<th>Identified as Priority Area for Conserving Aquatic Wildlife</th>
<th>Designated for a High Level of Aquatic Life Use</th>
<th>Reported as Attaining its Aquatic Life Use Designation</th>
<th>Classified for High Ecological Value in Antidegradation Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phillips Creek</td>
<td>Butler</td>
<td>4.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinhook Creek</td>
<td>Dearborn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipe Creek (headwaters)</td>
<td>Dearborn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sand Run Creek</td>
<td>Dearborn, Hamilton</td>
<td>3.1 in Ohio</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unnamed tributary with confluence on the eastern side of the Whitewater River just north of I-74</td>
<td>Dearborn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unnamed tributary with confluence on the eastern side of the Whitewater River and north of Braysville</td>
<td>Dearborn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Criteria:
- Blue for Ohio streams
- Green for Kentucky streams
- Purple for Indiana streams

OKI 2012 Environmental Consultations (prepared September 2011)
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.

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

**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.

<table>
<thead>
<tr>
<th>State Data Source</th>
<th>Basis for OKI Selection</th>
<th>Website</th>
<th>State Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ohio Comprehensive Wildlife Conservation Strategy (2005)</td>
<td>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.</td>
<td><a href="http://www.fws.gov/midwest/FederalAid/state_plans.html">http://www.fws.gov/midwest/FederalAid/state_plans.html</a></td>
<td>Ohio Dept. of Natural Resources, Div. of Wildlife</td>
</tr>
<tr>
<td>Kentucky Comprehensive Wildlife Conservation Strategy (2005) and 2010 Wildlife Action Plan Revision</td>
<td>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 &amp; 05090201 380110), Amphibians (area in Boone &amp; Kenton Co.s), or Bird Forestland &amp; Wetland (area in Campbell &amp; Kenton Co.s).</td>
<td><a href="http://fw.ky.gov/kfwis/stwg/">http://fw.ky.gov/kfwis/stwg/</a></td>
<td>Kentucky Dept. of Fish and Wildlife Resources</td>
</tr>
<tr>
<td>Indiana Comprehensive Wildlife Conservation Strategy, 2006</td>
<td>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.</td>
<td><a href="http://www.fws.gov/midwest/FederalAid/state_plans.html">http://www.fws.gov/midwest/FederalAid/state_plans.html</a></td>
<td>Indiana Dept. of Natural Resources, Div. of Fish and Wildlife, Wildlife Diversity Section</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>State Data Source</th>
<th>Basis for OKI Selection</th>
<th>Website</th>
<th>State Agency</th>
</tr>
</thead>
</table>
| Ohio Administrative Code, Chapter 3745-1 Water Quality Standards | • Ohio Exceptional Warmwater Habitat (capable of supporting and maintaining an exceptional or unusual community of warmwater aquatic organisms)  
• Ohio Coldwater Habitat (capable of supporting populations of native coldwater fish and associated vertebrate and invertebrate organisms and | [http://www.epa.ohio.gov/dsw/rules/3745_1.asp](http://www.epa.ohio.gov/dsw/rules/3745_1.asp) | 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) | [http://www.lrc.ky.gov/kar/TITLE401.HTM](http://www.lrc.ky.gov/kar/TITLE401.HTM) | 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.) | [http://www.in.gov/legislative/iac/T03270/A00020.PDF](http://www.in.gov/legislative/iac/T03270/A00020.PDF) | 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).

<table>
<thead>
<tr>
<th>State Data Source</th>
<th>Basis for OKI Selection</th>
<th>Website</th>
<th>State Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana Integrated Water Monitoring and Assessment Report: 2010 (draft pending U.S.EPA approval)</td>
<td>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.</td>
<td><a href="http://www.in.gov/idep/nps/2639.htm">http://www.in.gov/idep/nps/2639.htm</a> or 317-308-3173 Office of W. Q.: Integrated Report Coordinator</td>
<td>Ind. Dept. of Env. Mgmt. (IDEM), Office of Water Quality, Watershed Assessment &amp; Planning Branch</td>
</tr>
</tbody>
</table>
"...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

### 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.

<table>
<thead>
<tr>
<th>State Data Source</th>
<th>Basis for OKI Selection</th>
<th>Website</th>
<th>State Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ohio Administrative Code, Chapter 3745-1, Water Quality Standards</td>
<td>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 Carolina 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 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</td>
<td><a href="http://www.epa.ohio.gov/dsw/rules/3745_1.aspx">http://www.epa.ohio.gov/dsw/rules/3745_1.aspx</a></td>
<td>Ohio EPA, Div. of Surface Water (DSW)</td>
</tr>
<tr>
<td>Kentucky Administrative Regulations, Title 401, Chapter 10 Water Quality Standards, Sections 026-031</td>
<td>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)</td>
<td><a href="http://www.lrc.ky.gov/kar/TITLE401.HTM">http://www.lrc.ky.gov/kar/TITLE401.HTM</a></td>
<td>Ky. Energy and Environment Cabinet, Dept. for Environmental Protection/DEP, Div. of Water</td>
</tr>
<tr>
<td>Indiana Administrative Code, Title 327, Article 2, Water Quality Standards</td>
<td>• 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.</td>
<td><a href="http://www.in.gov/ide">http://www.in.gov/ide</a> m/5387.htm</td>
<td>Ind. Dept. of Env. Mgmt. (IDEM), Office of Water Quality, Watershed Assessment &amp; Plng. Branch</td>
</tr>
<tr>
<td>Listed Species (see notes at end of table)</td>
<td>Species listed at federal or state level</td>
<td>Number of species in the OKI Region that have ...</td>
<td>Butler</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Number of Animal Species</td>
<td>104</td>
<td>32</td>
<td>14</td>
</tr>
<tr>
<td>Number of Plant Species</td>
<td>61</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Number of Total Species</td>
<td>165</td>
<td>37</td>
<td>27</td>
</tr>
</tbody>
</table>

**Mammals (4)**

- American Badger: Taxidea taxus, Concern, Concern, Concern
- Bobcat: Lynx rufus, Endangered, Concern
- Eastern Spotted Skunk: Spilogale putorius, Concern
- Indiana Bat: Myotis sodalis, Imperiled, Endangered, Endangered, Endangered

**Reptiles (5)**

- Eastern Box Turtle: Terrapene carolina, Concern
- Kirtland's Snake: Clonophis kirtlandii, Imperiled, Threatened, Threatened, Endangered
- Northern Rough Greensnake: Opheodrys aestivus, Concern
- Spotted Turtle: Clemmys guttata, Threatened, Endangered
- Timber Rattlesnake: Crotalus horridus, Endangered

**Birds (23)**

- American Bittern: Botaurus lentiginosus
- Bachman's Sparrow: Amphila aestivalis, Vulnerable, Endangered, Extirpated, Endangered
- Bald Eagle: Haliaeetus leucocephalus, Delisted, Threatened, Threatened, Concern
- Bank Swallow: Riparia riparia
- Barn Owl: Tyto alba, Threatened, Concern, Endangered
- Bewick's Wren: Thryomanes bewickii, Endangered, Concern
- Black-crowned Night-heron: Nycticorax nycticorax, Threatened, Threatened, Endangered
- Henslow's Sparrow: Ammodramus henslowii, Concern, Threatened, Endangered
- Interior Least Tern: Sturna antillarum athalassos, Endangered, Threatened, Endangered
- Lark Sparrow: Chondestes grammacus
- Least Bittern:Ixobrychus exilis, Threatened, Threatened, Endangered
- Loggerhead Shrike: Lanius ludovicianus, Endangered, Endangered
- Northern Harrier: Circus cyaneus, Endangered, Threatened, Endangered
- Osprey: Pandion haliaetus, Threatened, Concern, Endangered
- Peregrine Falcon: Falco peregrinus, Threatened, Endangered
- Savannah Sparrow: Passerculus sandwichensis
- Sedge Wren: Cistothorus platensis, Concern, Concern, Endangered
<table>
<thead>
<tr>
<th>Listed Species (see notes at end of table)</th>
<th>Species listed at federal or state level</th>
<th>Number of species in the OKI Region that have …</th>
<th>Butler</th>
<th>Clermont</th>
<th>Hamilton</th>
<th>Warren</th>
<th>Boone</th>
<th>Campbell</th>
<th>Kenton</th>
<th>Dearborn</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Global Heritage Rank</td>
<td>Federal Status</td>
<td>Ohio Status</td>
<td>Kentucky Status</td>
<td>Indiana Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sharp-shinned Hawk</td>
<td>Accipiter striatus</td>
<td>Concern</td>
<td>Concern</td>
<td>Concern</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sora Rail</td>
<td>Porzana carolina</td>
<td>Concern</td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upland Sandpiper</td>
<td>Bartramia longicauda</td>
<td>Threatened</td>
<td>Historic</td>
<td>Endangered</td>
<td>●</td>
<td>● ● ●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vesper Sparrow</td>
<td>Poecetes gramineus</td>
<td>Endangered</td>
<td></td>
<td></td>
<td>●</td>
<td>● ● ●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Virginia Rail</td>
<td>Rallus limicola</td>
<td>Concern</td>
<td></td>
<td>Endangered</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yellow-crowned Night-heron</td>
<td>Nyctanassa violacea</td>
<td>Threatened</td>
<td></td>
<td>Endangered</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cave Salamander</td>
<td>Eurycea lucifuga</td>
<td>Endangered</td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern Hellbender</td>
<td>Cryptobranchus alleganiensis</td>
<td>Vulnerable</td>
<td>Endangered</td>
<td>Endangered</td>
<td>Endangered</td>
<td>● ● ●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Redback Salamander</td>
<td>Plethodon cinereus</td>
<td>Concern</td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Leopard Frog</td>
<td>Rana pipiens</td>
<td>Concern</td>
<td>Concern</td>
<td>Concern</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alligator Gar</td>
<td>Atractosteus spatula</td>
<td>Vulnerable</td>
<td>Exirpated</td>
<td>Endangered</td>
<td>●</td>
<td>● ● ●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bigeye Shiner</td>
<td>Notropis boops</td>
<td>Threatened</td>
<td></td>
<td></td>
<td>●</td>
<td>● ● ●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black Buffalo</td>
<td>Ictiobus niger</td>
<td>Concern</td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blue Catfish</td>
<td>Ictalurus furcatus</td>
<td>Concern</td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Blue Sucker</td>
<td>Cycleptus elongates</td>
<td>Critically imperiled</td>
<td>Endangered</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burbot</td>
<td>Lota lota</td>
<td>Concern</td>
<td>Concern</td>
<td></td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel Darter</td>
<td>Percina copelandi</td>
<td>Threatened</td>
<td></td>
<td>Endangered</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diamond Darter</td>
<td>Crystallaria cincta</td>
<td>Vulnerable</td>
<td>Candidate</td>
<td></td>
<td>Exirpated</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern Sand Darter</td>
<td>Ammomycrypta pellucida</td>
<td>Concern</td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goldeye</td>
<td>Hiodon aloidos</td>
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<td>Spottail Shiner</td>
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Amphibians (4)

Fish (20)

OKI 2012 Environmental Consultations - Appendix B
### Fish (continued)

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**Aquatic Snails (3)**

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<td><strong>Ornyx Rocksnail</strong></td>
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<td><strong>Varicose Rocksnail</strong></td>
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**Freshwater Mussels (39)**

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<td><strong>Catspaw</strong></td>
<td>Epioblasma obliquata obliquata</td>
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<td><strong>Clubshell</strong></td>
<td>Pleurobema clava</td>
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<td><strong>Cracking Pearlymussel</strong></td>
<td>Hemistena lata</td>
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Aquatic Molluscs (82)
## Freshwater Mussels (continued)

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### Insects (5)

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### Vascular Plants (61)

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**Global Heritage Rank** (rankings from 1 to 5)
- Critically imperiled globally (#1 rank)
- Imperiled global (#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**

**Sources for State Status of Species Listed for the OKI Region** (in addition to information in county data)
- 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
Transportation Projects and Prime and Important Farmland and Agricultural Districts in the OKI Region, 2012

Prime Farmland has soil characteristics that make it the world’s most productive agricultural land and a globally scarce resource. The Farmland Protection Policy Act discourages the conversion of Prime and Important Farmland to non-farm use by federally funded projects.

Agricultural Districts are enrolled in state programs for 5-year protection as agricultural land (per request of property owner).
- Ohio’s program requires review of public projects in which eminent domain would use 10 acres or 10% of an Agricultural District, whichever is greater (District minimum size is usually 10 acres).
- Kentucky’s program includes mitigation of impacts of state-funded projects and 2 public hearings to protect landowners from eminent domain in certain cases (District minimum size is 20 acres).
- Both state programs provide additional benefits to property owners.
- Indiana does not have Agricultural Districts.

Legend:
- Urbanized Area 2000
- Scheduled Transportation Improvements
- New Roadway
- Expanded Roadway
- Expanded Interchange
- Projects and Transportation Improvements
- New Roadway
- Expanded or Improved Roadway
- New or Expanded Interchange or Non-Roadway Improvement
- Major Streams

Farmland Classification:
- All areas are prime farmland
- Prime farmland if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of local or statewide importance
- Agricultural Districts
Appendix C

Data on Transportation Improvements
<table>
<thead>
<tr>
<th>ID #</th>
<th>Project Type</th>
<th>FACILITY/PROJECT NAME</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTLER COUNTY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scheduled Transportation Improvements (funding is committed that will advance the project)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20499</td>
<td>new roadway facility</td>
<td>SR 63 Extension</td>
<td>US 127 Eastward to existing SR 63 at SR4</td>
<td>New 2-lane facility</td>
</tr>
<tr>
<td>80516</td>
<td>new roadway facility</td>
<td>Oxford Connector</td>
<td>From US 27 to SR 73</td>
<td>Construct a new two-lane connector road (toll credits)</td>
</tr>
<tr>
<td>81769</td>
<td>adding lanes</td>
<td>US 27</td>
<td>From Stillwell-Beckett Rd to Chestnut Street in the City of Oxford</td>
<td>Widen mainline US 27 to design standards and upgrade signalized intersections. Toll credits 07 p.e.</td>
</tr>
<tr>
<td>86617</td>
<td>adding lanes</td>
<td>SR 4 Bypass Phase 5b</td>
<td>Princeton Road to the SR 4/SR 4 Bypass northern intersection</td>
<td>Widening to four lanes, intersection improvement at SR 4/SR 4 Bypass northern intersection</td>
</tr>
<tr>
<td>89308</td>
<td>adding lanes</td>
<td>CR 113 (Liberty Fairfield Rd)</td>
<td>SR 4 to Great Miami River</td>
<td>Widen to 5 lanes</td>
</tr>
<tr>
<td>Proposed Transportation Improvements (eligible for federal funding if recommended in an adopted regional transportation plan)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>101</td>
<td>R2-adding lanes</td>
<td>Cincinnati-Dayton Rd.</td>
<td>West Chester Rd. to I-75</td>
<td>Widen to 3 lanes</td>
</tr>
<tr>
<td>102</td>
<td>R2-adding lanes</td>
<td>Cox Rd.</td>
<td>Barrett to Tylersville</td>
<td>Widen to 3 lanes</td>
</tr>
<tr>
<td>103</td>
<td>R3-major reconstruction</td>
<td>South Hamilton Crossing</td>
<td>Grand Blvd in city of Hamilton connecting SR 4 (Erie Blvd) on the east side of the four existing CSX tracks with University Blvd on the west side</td>
<td>PID: 81174; Replace existing at-grade railroad crossing with a grade separation and bridge overpass created by extending Grand Blvd</td>
</tr>
<tr>
<td>104</td>
<td>R2-adding lanes</td>
<td>SR 128</td>
<td>Rossgate to Cin Brookville</td>
<td>Widen to 3 lanes</td>
</tr>
<tr>
<td>105</td>
<td>R2-adding lanes</td>
<td>SR 747</td>
<td>Princeton Rd. to SR 4 (N. Jct)</td>
<td>Widen to 5 lanes with landscaped median and 10’ hike/bike path</td>
</tr>
<tr>
<td>106</td>
<td>R2-adding lanes</td>
<td>US 127 (Pleasant Ave)</td>
<td>Symmes Rd to St Clair Ave</td>
<td>Add 1 lane with safety upgrades</td>
</tr>
<tr>
<td>107</td>
<td>PT-public transportation</td>
<td>SORTA Liberty Twp. Park &amp; Ride</td>
<td>Vicinity of SR 129 and Cincinnati-Dayton Road</td>
<td>Utilize ODOT/BCTID Liberty Township Park &amp; Ride; extend Route 42X to new location</td>
</tr>
<tr>
<td>108</td>
<td>R2-adding lanes</td>
<td>Bethany Rd.</td>
<td>Cincinnati Dayton to Butler Warren</td>
<td>Widen to 3 lanes and add bikepath</td>
</tr>
<tr>
<td>402</td>
<td>R2-adding lanes</td>
<td>Butler-Warren Rd</td>
<td>Fields-Ertel to US 42</td>
<td>Widen to 3 Lanes</td>
</tr>
<tr>
<td>403</td>
<td>R2-adding lanes</td>
<td>Butler-Warren Rd</td>
<td>US 42 to Tylersville Rd.</td>
<td>Widen to 3 Lanes</td>
</tr>
<tr>
<td>ID #</td>
<td>Project Type</td>
<td>FACILITY/PROJECT NAME</td>
<td>LOCATION</td>
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<td>Scheduled Transportation Improvements (funding is committed that will advance the project)</td>
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<tr>
<td></td>
<td></td>
<td>Extend five lane Bach-Buxton extension with SR 32 interchange</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>New Glen Este-Williamsville overpass</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Phase 1 of IR 275/SR 32 Interchange project</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>New 5-lane roadway</td>
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<td></td>
<td></td>
<td>Widen to 5 lanes</td>
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<tr>
<td></td>
<td></td>
<td>New two-lane connector with turn lanes at Old SR 74 intersection</td>
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<td></td>
<td></td>
<td>New 3-lane connector and ramp improvements</td>
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<td>Widen to three lanes</td>
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<td></td>
<td></td>
<td>New three-lane frontage road with additional turn lanes at major</td>
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<td></td>
<td></td>
<td>New interchange</td>
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<td></td>
<td>Convert existing half interchange to full</td>
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<td>Proposed Transportation Improvements (eligible for federal funding if recommended in an adopted regional transportation plan)</td>
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<td></td>
<td></td>
<td>IR 275/SR 32 Interchange</td>
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<td></td>
<td>Eastern Corridor Segment IV</td>
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<td></td>
<td>Phase 1</td>
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<td></td>
<td></td>
<td>TRAC TIER 1; PID.76258; Construction and ROW for IR 275SR 32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22970-2</td>
<td>adding lanes</td>
<td>Scheduled Transportation Improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>76289</td>
<td>reconstruction of major interchange</td>
<td>Approximately 1.5 miles north of SR 32, to 1 mile south of SR 32, including portions of SR 32.</td>
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<tr>
<td></td>
<td></td>
<td>Glen Este-Williamsville Rd.</td>
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<tr>
<td></td>
<td></td>
<td>Old SR 74</td>
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<tr>
<td>82552</td>
<td>new roadway facility</td>
<td>Aicholtz Road Extension</td>
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<tr>
<td>82554</td>
<td>adding lanes</td>
<td>Aicholtz Road Widening</td>
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<tr>
<td>82558</td>
<td>new roadway facility</td>
<td>Old SR 74 - Phase 1</td>
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<td>82557</td>
<td>adding lanes</td>
<td>Tina Drive Extension</td>
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<tr>
<td>82561</td>
<td>adding lanes</td>
<td>Old SR 74 - Phase 1</td>
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<td>82562</td>
<td>adding lanes</td>
<td>Old SR 74 - Phase 1</td>
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<tr>
<td>82567</td>
<td>reconstruction of major interchange</td>
<td>Aicholtz Road Widening</td>
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<tr>
<td>82568</td>
<td>reconstruction of major interchange</td>
<td>Aicholtz Road Widening</td>
<td></td>
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<tr>
<td>82569</td>
<td>reconstruction of major interchange</td>
<td>Aicholtz Road Widening</td>
<td></td>
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<td>82570-2</td>
<td>adding lanes</td>
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<td>Phase 1</td>
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<tr>
<td></td>
<td></td>
<td>TRAC TIER 1; PID.76258; Construction and ROW for IR 275SR 32</td>
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</tr>
</tbody>
</table>

Table 5. Transportation Improvements for Expanding Highway Capacity in Ohio Counties in the OKI Region (OKI Regional Transportation Plan, March, 2012)
## Table 5. Transportation Improvements for Expanding Highway Capacity in Ohio Counties in the OKI Region
(OKI Regional Transportation Plan, March, 2012)

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</tr>
</thead>
<tbody>
<tr>
<td>203</td>
<td>R6-interchange improvement</td>
<td>Eastern Corridor Segment IV Phase 2</td>
<td>IR 275 SR 32 EB and southside of Eastgate Blvd Intersection</td>
<td>TRAC TIER 3; PID: 82309; Construction of IR 275 SR 32 EB and southside of Eastgate Blvd Intersection.</td>
</tr>
<tr>
<td>204</td>
<td>R6-interchange improvement</td>
<td>Eastern Corridor Segment IV Phase 3</td>
<td>IR 275, SR 32</td>
<td>TRAC TIER 3; PID: 82134; Braided ramp connections between Eastgate Blvd and IR 275. Phase 3 of the interchange project.</td>
</tr>
<tr>
<td>205</td>
<td>R2-adding lanes</td>
<td>Eastern Corridor CLER-SR 32-2.25 Segment IV(a)</td>
<td>SR 32 from Glen Este-Withamsville to Old SR 74 - and new overpass at SR 32 and Glen Este-Withamsville Road</td>
<td>TRAC TIER 3; PID: 82370; Grade separation and widening (Stephenson=Includes construction of a new overpass at Glen Este-Withamsville Road and SR 32 and WB exit ramp from SR 32 and EB entrance ramp from SR 32) (SR 32/Glen Este-Withamsville Overpass = PID 22970-2)</td>
</tr>
<tr>
<td>206</td>
<td>R2-adding lanes</td>
<td>Old SR 74 - Phase 1</td>
<td>From Glen Este-Withamsville to the Old SR 74 intersection with SR 32 near Shayler Road</td>
<td>Widening and turn lane improvements to compliment the Bach-Buxton interchange and other Eastern Corridor, Segment IVa improvements, includes sidewalks where appropriate</td>
</tr>
<tr>
<td>207</td>
<td>R1-new roadway facility</td>
<td>NEW Aicholtz Rd Connector</td>
<td>Mt. Carmel-Tobasco to Eastgate Blvd</td>
<td>Reconnect Aicholtz Rd/Rust Ln under I-275 to Mt. Carmel-Tobasco Rd, PID 82553</td>
</tr>
<tr>
<td>208</td>
<td>PT-public transportation</td>
<td>SORTA Milford Park &amp; Ride</td>
<td>Near current Park &amp; Ride lot (Bob notes: Main-Kroger, Main St./50)</td>
<td>Replace nearby leased facility with new park &amp; ride</td>
</tr>
<tr>
<td>321</td>
<td>PT-public transportation</td>
<td>Eastern Corridor Oasis Line Segments 1, 2, 3 &amp; 4 ALSO HAMILTON CO.</td>
<td>Oasis Rail Line (downtown Cincinnati to Milford)</td>
<td>TRAC TIER 3; PID 86463; Fluegemann=“Rail transit plus feeder bus. Four segments from downtown Cincinnati to Milford (1&amp;2=from downtown Cincinnati to Fairfax / 3&amp;4=from Fairfax to Milford). Includes development of transit rail facility and supporting infrastructure. Riverfront Transit Center to Cincinnati Boathouse Facility.</td>
</tr>
</tbody>
</table>

**HAMILTON COUNTY**

Scheduled Transportation Improvements (funding is committed that will advance the project)

<table>
<thead>
<tr>
<th>ID #</th>
<th>Project Type</th>
<th>FACILITY/PROJECT NAME</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>76257</td>
<td>adding lanes</td>
<td>IR 75</td>
<td>From 0.1 mile N of Harrison Ave. to 0.1 miles S of Paddock Rd.</td>
<td>Major rehabilitation of pavement. Phase 4 of IR 75 corridor projects. PE for phases 1-7</td>
</tr>
<tr>
<td>77889</td>
<td>adding lanes</td>
<td>IR 75</td>
<td>From south of SR 562 to north of SR 4</td>
<td>Widen for additional through lanes, reconstruct interchanges as needed (phase 8)</td>
</tr>
<tr>
<td>82286</td>
<td>adding lanes</td>
<td>IR 75</td>
<td>0.4 miles N of Mitchell Ave to 0.2 miles N of SR 562</td>
<td>Reconstruct IR 75 from north of Mitchell interchange through SR 562 (Phase 7)</td>
</tr>
<tr>
<td>82288</td>
<td>adding lanes</td>
<td>IR 75</td>
<td>0.3 miles S of Shepherd Lane to 0.2 miles N of Glendale-Milford Rd</td>
<td>Reconstruct IR 75 between Shepherd Lane and Glendale-Milford Road (Phase 8 of IR 75 projects)</td>
</tr>
<tr>
<td>83077</td>
<td>adding lanes</td>
<td>IR 71</td>
<td>Pfeiffer Road to I-275</td>
<td>Add 1 auxiliary lane northbound</td>
</tr>
<tr>
<td>87036</td>
<td>adding lanes</td>
<td>West ML King Drive (CR 612)</td>
<td>Central Parkway to Clifton Avenue.</td>
<td>Widen to 5 lanes w/ TWTL from Central Pkwy to Clifton, 8 lanes from Clifton to Reading.</td>
</tr>
<tr>
<td>87401</td>
<td>reconstruction of major interchange</td>
<td>IR 71</td>
<td>Fields-Ertel/Mason-Montgomery</td>
<td>New NB exit ramp</td>
</tr>
</tbody>
</table>

OKI 2012 Environmental Consultations - Appendix C
### Table 5. Transportation Improvements for Expanding Highway Capacity in Ohio Counties in the OKI Region

(OKI Regional Transportation Plan, March, 2012)

<table>
<thead>
<tr>
<th>ID #</th>
<th>Project Type</th>
<th>FACILITY/PROJECT NAME</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>88124</td>
<td>adding lanes</td>
<td>IR 75</td>
<td>From bridge at 10.10 (over Mill Creek) to SR 126 (phase 3)</td>
<td>Add 4th lane in each direction and associated improvements</td>
</tr>
<tr>
<td>88133</td>
<td>adding lanes</td>
<td>IR 75</td>
<td>Between Galbraith and Shepherd Roads</td>
<td>Add 4th lane and auxiliary lane for NB IR 75</td>
</tr>
<tr>
<td>88134</td>
<td>reconstruction of major</td>
<td>IR 75</td>
<td>WB SR 126 to NB IR 75 and SB IR 75 to SB SR 126</td>
<td>Construct new ramps</td>
</tr>
<tr>
<td>88135</td>
<td>new roadway facility</td>
<td>GE Parkway</td>
<td>Shepherd Lane to Glendale Milford Road</td>
<td>Add local roadway connection on eastside of IR 75</td>
</tr>
<tr>
<td>88706</td>
<td>new roadway facility</td>
<td>Kennedy Connector</td>
<td>0.53 mile parallel route to Ridge Avenue (Modification #1, 6-7-11, amendment #5, 1-12-12)</td>
<td>New Kennedy Connector to relocated Barrow Avenue. Relocation on Ibsen from Marburg to new connector</td>
</tr>
<tr>
<td>88790</td>
<td>reconstruction of major</td>
<td>SR 264 (Bridgetown Rd)</td>
<td>Intersection of SR 264/Taylor/Bridgetown</td>
<td>Improve intersection by improving 5 leg intersection to 4 leg intersection, relocate Taylor Road</td>
</tr>
<tr>
<td>89053</td>
<td>adding lanes</td>
<td>IR 71</td>
<td>Temporary maintenance of traffic for routing IR 71 traffic onto IR 471</td>
<td>Construction of 2 lane connections between IR 71 and IR 471</td>
</tr>
<tr>
<td>89069</td>
<td>adding lanes</td>
<td>IR 75</td>
<td>IR 75 corridor</td>
<td>Widen IR 75 from north of bridge over Findlay Street to northern terminus of Brent Spence Bridge</td>
</tr>
</tbody>
</table>

Proposed Transportation Improvements (eligible for federal funding if recommended in an adopted regional transportation plan)

<table>
<thead>
<tr>
<th>302</th>
<th>R3-major reconstruction</th>
<th>Eastern Corridor Red Bank Rd Segment</th>
<th>Red Bank Rd, US 50 to IR 71</th>
<th>TRAC TIER 3; PID: 86461; ROW and construction for controlled access multimodal arterial and tie into new interchange at US 50.</th>
</tr>
</thead>
<tbody>
<tr>
<td>303</td>
<td>R3-major reconstruction/R6-interchange improvements</td>
<td>Mill Creek Expressway Phase 4</td>
<td>IR-75 - 2.30</td>
<td>TRAC TIER 1; PID: 76257; Study the corridor for access improvements including interchanges at Hopple St., IR 74 and Mitchell Ave. Study area begins at SLM 2.30 +/- and extends to 10.10 +/- . The northern study limit ends at the southern study limits of PID 76256. Project limits for the conduction phase are the 2.30 +/- to the 6.09 +/- . Work includes Major rehabilitation of pavement, bridge work, and other work determined by the study phase.</td>
</tr>
<tr>
<td>307</td>
<td>R2-adding lanes</td>
<td>Mill Creek Expressway Phase 8</td>
<td>IR-75 - 7.85</td>
<td>TRAC TIER 3; PID: 77889; Project will widen for additional through lanes, rehabilitate existing pavement and bridges. Reconstruct SR 562 interchange, remove the Towne Ave. interchange, complete minor improvements to the Paddock Road interchange, and tie into the existing SR 126 interchange southern ramps. Project extends from SR 562 to SR 126/Galbraith Rd. area.</td>
</tr>
<tr>
<td>308</td>
<td>R2-adding lanes</td>
<td>US 42 (Reading Rd)</td>
<td>Clinton Springs to Paddock</td>
<td>Add one lane &amp; Intersection improvements</td>
</tr>
<tr>
<td>309</td>
<td>R2-adding lanes</td>
<td>US 42 (Reading Rd)</td>
<td>Victory Pkwy to Langdon Farm Rd</td>
<td>Add one lane</td>
</tr>
<tr>
<td>ID #</td>
<td>Project Type</td>
<td>FACILITY/PROJECT NAME</td>
<td>LOCATION</td>
<td>DESCRIPTION</td>
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<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>310</td>
<td>R3-major reconstruction</td>
<td>Reading Rd Grade Separation, Sharonville</td>
<td>Reading Rd at-grade Norfolk</td>
<td>Review the Reading Rd grade crossing hazards and preliminary work that was performed in order to prioritize the project for federal funding.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Southern railroad crossing</td>
<td>äch</td>
</tr>
<tr>
<td>311</td>
<td>R3-major reconstruction</td>
<td>SR 126 (Ronald Reagan Hwy)</td>
<td>US 27 to IR 275</td>
<td>Roadway Rehabilitation. Including Lighting, Guard Rail, Bridges, &amp; &quot;Slip Repair&quot;</td>
</tr>
<tr>
<td>314</td>
<td>R2-adding lanes</td>
<td>Thru the Valley Phase 3</td>
<td>IR 75 - 10.10</td>
<td>TRAC TIER 3; PID: 88124; Add fourth lane in each direction, add auxiliary lanes from bridge at 10.10 (over Mill creek) to SR126, reconstruct left hand exit from northbound IR75 to Galbraith Road as a right hand exit and improve ramps from: eastbound SR126 to southbound IR75, Galbraith Road to southbound IR75 and northbound IR75 to eastbound/westbound SR126.</td>
</tr>
<tr>
<td>315</td>
<td>R6-interchange improvement</td>
<td>Thru the Valley Phase 7</td>
<td>IR 75 - 10.52</td>
<td>TRAC TIER 3; PID: 88134; Construct a new ramp for westbound SR126 to northbound IR75 and southbound IR75 to westbound SR126. Remove ramp from Galbraith to westbound, SR126 east of IR75.</td>
</tr>
<tr>
<td>316</td>
<td>R3-major reconstruction</td>
<td>Thru the Valley Phase 8</td>
<td>IR 75 - 14.56</td>
<td>TRAC TIER 3; PID: 76256; Limits from 14.50 to 16.50, Glendale Milford to Kemper. Study the corridor for access improvements, study limits are from SLM 9.25 +/- to 15.50 +/- . Work includes major rehabilitation to the pavement, bridge work, and work determined as a result of the study.</td>
</tr>
<tr>
<td>317</td>
<td>PT-public transportation</td>
<td>Cincinnati Streetcar Phase 1</td>
<td>Phase 1: Riverfront Loop</td>
<td>The Riverfront Loop will extend from 5th street south to Second Street.</td>
</tr>
<tr>
<td>318</td>
<td>R3-major reconstruction</td>
<td>Western Hills Viaduct</td>
<td>Western Hills Viaduct</td>
<td>PID 85388; Replace or repair viaduct. If replacement of viaduct is warranted, increase rail capacity and improve access at the Queensgate Yard due to fewer piers.</td>
</tr>
<tr>
<td>319</td>
<td>PT-public transportation/F-freight</td>
<td>Acquisition of Abandoned Railroad Right of Way</td>
<td>Norfolk Southern Right-of-Way</td>
<td>Preservation of a segment of Norfolk Southern ROW which runs between Bond Hill and and the &quot;Idlewild&quot; railroad junction. This segment was identified for abandonments a few years ago, however, NS decided not to proceed. The funds would be used to purchase the ROW if NS decides to file for abandonment again.</td>
</tr>
<tr>
<td>320</td>
<td>PT-public transportation</td>
<td>Anderson Center Station Park and Ride Phase 2</td>
<td>Five Mile Rd &amp; Towne Center Way</td>
<td>Expansion of transit hub for METRO with the addition of at least 100 park and ride spaces.</td>
</tr>
<tr>
<td>321</td>
<td>PT-public transportation</td>
<td>Eastern Corridor Oasis Line Segments 1, 2, 3 &amp; 4</td>
<td>Oasis Rail Line (downtown Cincinnati to Milford)</td>
<td>TRAC TIER 3; PID 86463; Fluegemann=&quot;Rail transit plus feeder bus. Four segments from downtown Cincinnati to Milford (1&amp;2=from downtown Cincinnati to Fairfax / 3&amp;=from Fairfax to Milford). Includes development of transit rail facility and supporting infrastructure. Riverfront Transit Center to Cincinnati Boathouse Facility.</td>
</tr>
<tr>
<td>ID #</td>
<td>Project Type</td>
<td>FACILITY/PROJECT NAME</td>
<td>LOCATION</td>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>-------</td>
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<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>322</td>
<td>F-freight</td>
<td>Hopple St Passing Track and Crossovers</td>
<td>CSX Queensgate and NS Gest Street Yards</td>
<td>Reconstruct portion of the Hopple St Viaduct to provide additional horizontal clearance and approximately 1,000 feet of additional track to minimize through train delay and improve railroad operations at the NS Gest St Yard. Also construct crossovers or connecting rail track south of the Hopple St Viaduct to allow through trains to access the two main tracks for NB and SB movements.</td>
</tr>
<tr>
<td>323</td>
<td>R5-new interchange</td>
<td>IR 71</td>
<td>Martin Luther King</td>
<td>TRAC TIER 2; HAM - 71 - 3.50 - MLK Uptown interchange with IR-71</td>
</tr>
<tr>
<td>326</td>
<td>PT-public transportation</td>
<td>SORTA: New BRT Service: Gilbert Avenue/Montgomery Rd Corridor</td>
<td>Gilbert Avenue/Montgomery Rd Corridor</td>
<td>Conduct alternatives analysis, design, and implement BRT improvements as part of regional BRT project</td>
</tr>
<tr>
<td>327</td>
<td>PT-public transportation</td>
<td>SORTA: North Bend/Cheviot Park &amp; Ride</td>
<td>Along North Bend Rd in/near Cheviot</td>
<td>Replace nearby leased facility with new park &amp; ride</td>
</tr>
<tr>
<td>330</td>
<td>R1-new roadway facility</td>
<td>NEW Eastern Corridor Relocated SR 32 ALSO CLERMONT CO.</td>
<td>US 50 to Eight Mile Rd</td>
<td>TRAC TIER 3; PID: 86462; Relocated and construction for controlled access, new 4-lane, multimodal arterial facility with river crossing west of IR 275.</td>
</tr>
<tr>
<td>407</td>
<td>R6-interchange improvement</td>
<td>IR 71 Fields Ertel Interchange ALSO WARREN CO.</td>
<td>Interchange at Fields Ertel/Mason-Montgomery</td>
<td>TRAC TIER 2; PID:81052, HAM/WAR - 71 - Field Ertel/Mason Montgomery Int. Multimodal Improvements, new NB off ramp, intersection improvements etc.</td>
</tr>
</tbody>
</table>

**WARREN COUNTY**

Scheduled Transportation Improvements (funding is committed that will advance the project)

<table>
<thead>
<tr>
<th>ID #</th>
<th>Project Type</th>
<th>FACILITY/PROJECT NAME</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>85320</td>
<td>new roadway facility</td>
<td>SR 123/SR 63 Connector</td>
<td>SR 123 to SR 63 west of Lebanon</td>
<td>New connector road</td>
</tr>
</tbody>
</table>

Proposed Transportation Improvements (eligible for federal funding if recommended in an adopted regional transportation plan)

<table>
<thead>
<tr>
<th>ID #</th>
<th>Project Type</th>
<th>FACILITY/PROJECT NAME</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>401</td>
<td>R2-adding lanes</td>
<td>NEW Bethany Rd</td>
<td>West Mason Corp. Limit to Mason-Morrow-Millgrove Rd.</td>
<td>Widen to 5 lanes and connect Bethany and Mason-Morrow-Millgrove</td>
</tr>
<tr>
<td>402</td>
<td>R2-adding lanes</td>
<td>Butler-Warren Rd ALSO BUTLER CO.</td>
<td>Fields-Ertel to US 42</td>
<td>Widen to 3 Lanes</td>
</tr>
<tr>
<td>403</td>
<td>R2-adding lanes</td>
<td>Butler-Warren Rd ALSO BUTLER CO.</td>
<td>US 42 to Tylersville Rd.</td>
<td>Widen to 3 lanes</td>
</tr>
<tr>
<td>404</td>
<td>R2-adding lanes</td>
<td>Kings Island Dr Extension</td>
<td>Kings Mill Rd. to Mason-Morrow-Millgrove Rd.</td>
<td>Add one lane in each direction on Columbia Rd or Widen to 5 lanes on Kings Island Dr Extension</td>
</tr>
<tr>
<td>405</td>
<td>R2-adding lanes</td>
<td>Mason Montgomery Rd</td>
<td>Fields Ertel to Socialville Fosters Road</td>
<td>Widen one lane in each direction</td>
</tr>
<tr>
<td>ID #</td>
<td>Project Type</td>
<td>FACILITY/PROJECT NAME</td>
<td>LOCATION</td>
<td>DESCRIPTION</td>
</tr>
<tr>
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<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>406</td>
<td>PT-public transportation</td>
<td>SORTA Kings Island</td>
<td>Near Western Row and Columbia Road intersection</td>
<td>Replace nearby leased facility with new park &amp; ride</td>
</tr>
<tr>
<td>407</td>
<td>R6-interchange improvement</td>
<td>IR 71 Fields Ertel Interchange</td>
<td>Interchange at Fields Ertel/Mason-Montgomery</td>
<td>TRAC TIER 2; PID:81052, HAM/WAR - 71 - Field Ertel/Mason Montgomery Int. Multimodal Improvements, new NB off ramp, intersection improvements etc.</td>
</tr>
</tbody>
</table>
### Table 5. Transportation Improvements for Expanding Highway Capacity in Northern Kentucky Counties in the OKI Region
(OKI Regional Transportation Plan, March, 2012)

<table>
<thead>
<tr>
<th>ID #</th>
<th>Project Type</th>
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</tr>
</thead>
<tbody>
<tr>
<td>6-14.00</td>
<td>reconstruction of major interchange</td>
<td>IR 75/KY 536 Interchange</td>
<td>IR 71/75 at KY 536 (Mt. Zion Road) See 14.01 for study</td>
<td>MP 177.659 to 178.345--Reconstruct KY 536 (Mt. Zion Rd) Interchange</td>
</tr>
<tr>
<td>6-14.50</td>
<td>adding lanes</td>
<td>IR 75</td>
<td>From KY 536 to US 42 (MP 178.04 to 180.11)</td>
<td>Add auxiliary lane on IR 71/75 (toll credits)</td>
</tr>
<tr>
<td>6-18.00</td>
<td>reconstruction of major interchange</td>
<td>IR 75/KY 338 Interchange</td>
<td>KY 338 (Richwood Road) Interchange</td>
<td>MP 175.217 to 175.622--Reconstruct KY 388 (Richwood Rd) Interchange</td>
</tr>
<tr>
<td>6-158.00</td>
<td>adding lanes</td>
<td>KY 536</td>
<td>From US 42 to I-75</td>
<td>Widen to 5 lanes</td>
</tr>
<tr>
<td>6-351.10</td>
<td>adding lanes</td>
<td>US 25</td>
<td>Richwood Road to Winning Colors Drive, grade separation of KY 338 at US 25 &amp; RR Overpass</td>
<td>Major widening to 5 lanes</td>
</tr>
<tr>
<td>6-351.20</td>
<td>adding lanes</td>
<td>US 25</td>
<td>Winning Colors Drive to Beesom Drive</td>
<td>Major widening to 5 lanes</td>
</tr>
<tr>
<td>6-351.30</td>
<td>adding lanes</td>
<td>US 25</td>
<td>Beesom Drive to Aristocrat Drive with grade separation of KY 536 at US 25</td>
<td>Major widening to 5 lanes</td>
</tr>
<tr>
<td>6-351.40</td>
<td>adding lanes</td>
<td>US 25</td>
<td>Aristocrat Drive to RR spur crossing</td>
<td>Major widening to 5 lanes</td>
</tr>
<tr>
<td>6-8000.21</td>
<td>reconstruction of major interchange</td>
<td>IR 275</td>
<td>I-275/KY 212 Interchange and KY 20 reconstruction</td>
<td>Near Cincinnati/Northern KY International Airport (toll credits)</td>
</tr>
<tr>
<td>6-8001.21</td>
<td>adding lanes</td>
<td>KY 237</td>
<td>From Woodcreek Drive to Rogers Lane (middle section)</td>
<td>MP 3.166 to 5.37--Reconstruct and widen KY 237</td>
</tr>
<tr>
<td>6-8001.25</td>
<td>adding lanes</td>
<td>KY 237</td>
<td>MP 5.37 to 6.262--Rogers Lane to KY 18 (north section)</td>
<td>Reconstruct and widen KY 237</td>
</tr>
</tbody>
</table>

**BOONE COUNTY**

Scheduled Transportation Improvements (funding is committed that will advance the project)

<table>
<thead>
<tr>
<th>ID #</th>
<th>Project Type</th>
<th>FACILITY/PROJECT NAME</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>501</td>
<td>R2-adding lanes</td>
<td>CR 1001 (Camp Ernst Rd)</td>
<td>KY 237 to KY 536</td>
<td>Reconstruct and widen Camp Ernst Road</td>
</tr>
<tr>
<td>502</td>
<td>R2-adding lanes</td>
<td>KY 237 (Gunpowder Rd.)</td>
<td>KY 536 (Mt. Zion Rd) to US 42</td>
<td>Reconstruct and widen to five lane roadway</td>
</tr>
<tr>
<td>503</td>
<td>R2-adding lanes</td>
<td>Hicks Pike</td>
<td>US 42 to KY 338</td>
<td>Widen/improve</td>
</tr>
<tr>
<td>504</td>
<td>R2-adding lanes</td>
<td>IR 71 SB ramp</td>
<td>I-71/75 SB to I-71 SB</td>
<td>Add 1 lane</td>
</tr>
<tr>
<td>505</td>
<td>R3-major reconstruction</td>
<td>US 25/KY 338 RR Grade Separation</td>
<td>KY 338 (Richwood Rd) to Winning Colors Dr</td>
<td>6-351.10: Grade Separation of KY 338 at US 25 and RR overpass, major widening to 5 lanes (previous analyzed PID 8200.10)</td>
</tr>
</tbody>
</table>
Table 5. Transportation Improvements for Expanding Highway Capacity in Northern Kentucky Counties in the OKI Region
(OKI Regional Transportation Plan, March, 2012)

<table>
<thead>
<tr>
<th>ID #</th>
<th>Project Type</th>
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</tr>
</thead>
<tbody>
<tr>
<td>506</td>
<td>R2-adding lanes</td>
<td>KY 18 (Burlington Pike)</td>
<td>Caroline Williams Way to KY 338</td>
<td>Reconstruct and widen</td>
</tr>
<tr>
<td>507</td>
<td>R2-adding lanes</td>
<td>KY 236 (Donaldson Rd.)</td>
<td>from Cherry Tree Lane to Mineola Pike (KY 3076)</td>
<td>Major widening</td>
</tr>
<tr>
<td>508</td>
<td>BP-bike/ped facility</td>
<td>KY 237 (N. Bend Rd)</td>
<td>between KY 18 and I-275</td>
<td>Pave and stripe existing shoulders to provide bike and pedestrian lanes</td>
</tr>
<tr>
<td>509</td>
<td>R2-adding lanes</td>
<td>KY 3060 (Frogtown Rd)</td>
<td>US 42 to US 25</td>
<td>Reconstruct and widen</td>
</tr>
<tr>
<td>510</td>
<td>R2-adding lanes</td>
<td>KY 3076 (Mineola Pike)</td>
<td>I-275 to KY 236 (Donaldson Rd.)</td>
<td>Widen/improve</td>
</tr>
<tr>
<td>511</td>
<td>R2-adding lanes</td>
<td>KY 338 (Richwood Rd)</td>
<td>Triple Crown Boulevard to Hicks Pike</td>
<td>Reconstruct and widen</td>
</tr>
<tr>
<td>512</td>
<td>R2-adding lanes</td>
<td>KY 536</td>
<td>from US 25 to Kenton County line</td>
<td>Widen to 5 lanes</td>
</tr>
<tr>
<td>513</td>
<td>R2-adding lanes</td>
<td>US 25</td>
<td>KY 16 to KY 338</td>
<td>Reconstruct and widen</td>
</tr>
<tr>
<td>514</td>
<td>R6-interchange improvement</td>
<td>US 42</td>
<td>I-75 interchange in Florence</td>
<td>Provide Walkway on Northside of US 42 thru I-75 Interchange</td>
</tr>
<tr>
<td>515</td>
<td>R2-adding lanes</td>
<td>US 42</td>
<td>I-71/75 to KY 842</td>
<td>Reconstruct/major widening of US-42 from I-71/75 to KY 842</td>
</tr>
<tr>
<td>516</td>
<td>R3-major reconstruction</td>
<td>US 42</td>
<td>New Haven School Rd to KY 3060</td>
<td>Reconstruct US 42 from New Haven School Rd to KY 3060</td>
</tr>
<tr>
<td>517</td>
<td>R1-new roadway facility</td>
<td>NEW Frogtown Rd. Connector Extension-North</td>
<td>KY 3060 Frogtown Rd. to KY 536</td>
<td>New extension</td>
</tr>
<tr>
<td>518</td>
<td>R6-interchange improvement</td>
<td>IR 71/75</td>
<td>Mall Road Interchange</td>
<td>06-409.00 - Complete interchange by constructing a ramp from existing Mall Road Interchange to southbound I-71/75</td>
</tr>
<tr>
<td>519</td>
<td>R1-new roadway facility</td>
<td>NEW Connector</td>
<td>from KY 237 (Pleasant Valley Road) to KY 842 (Hopeful Church Road)</td>
<td>New connector</td>
</tr>
<tr>
<td>520</td>
<td>PT-public transportation</td>
<td>TANK Long Term: Airport Hub</td>
<td>Greater Cincinnati and Northern Kentucky International Airport</td>
<td>Construct a Transit Hub near the CVG international airport as part of TANK's proposed suburban transit hub network.</td>
</tr>
<tr>
<td>521</td>
<td>R2-adding lanes</td>
<td>KY 338 (Richwood Rd)</td>
<td>US 25 (Dixie Hwy) to Triple Crown Boulevard (does NOT include TIP projects 6-18.00: KY 338/I-75 Interchange Improvement and 6-351.10: Grade separation of KY 338 at US 25 improvement)</td>
<td>Widen to 5 lanes (less than 0.75 miles in length)</td>
</tr>
</tbody>
</table>
### Table 5. Transportation Improvements for Expanding Highway Capacity in Northern Kentucky Counties in the OKI Region
(OKI Regional Transportation Plan, March, 2012)

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>719</td>
<td>PT-public transportation</td>
<td>TANK Short Term: I-75/I-71 Transit Way ALSO KENTON CO.</td>
<td>I-75 and I-71 in Kenton and Boone counties</td>
<td>Implement shoulder project</td>
</tr>
</tbody>
</table>

**CAMPBELL COUNTY**

Scheduled Transportation Improvements (funding is committed that will advance the project)

<table>
<thead>
<tr>
<th>6-156.00</th>
<th>adding lanes</th>
<th>KY 547</th>
<th>AA Highway to KY 10</th>
<th>Reconstruction, add climbing lane</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-352.00</td>
<td>new roadway facility</td>
<td>KY 536</td>
<td>US 27 to AA Highway (KY 9)</td>
<td>Extension of existing roadway (toll credits)</td>
</tr>
<tr>
<td>6-8101.01</td>
<td>new roadway facility</td>
<td>KY 9</td>
<td>MP 21.643 to KY 8 near 4th Street Bridge</td>
<td>Reconstruct along a new route with 4 through lanes</td>
</tr>
<tr>
<td>6-8104.00</td>
<td>reconstruction of major interchange</td>
<td>IR 471</td>
<td>KY 8 interchange</td>
<td>Construct a new southbound off-ramp from I-471 to KY 8</td>
</tr>
<tr>
<td>6-8105.01</td>
<td>new roadway facility</td>
<td>New Route</td>
<td>From I-275 to the AA Highway -- new connector road</td>
<td>I-275 to AA Highway (toll credits)--see 8105.02</td>
</tr>
<tr>
<td>6-8105.02</td>
<td>new roadway facility</td>
<td>New Route</td>
<td>From I-275 to the AA Highway -- new connector road</td>
<td>Transportation improvements to AA-IR 275 Connector--see 6-8105.01</td>
</tr>
<tr>
<td>6-8105.03</td>
<td>new roadway facility</td>
<td>New Route</td>
<td>Near Northern Kentucky University</td>
<td>Construct a new Technology Triangle Access Road (toll credits)</td>
</tr>
</tbody>
</table>

Proposed Transportation Improvements (eligible for federal funding if recommended in an adopted regional transportation plan)

<table>
<thead>
<tr>
<th>601</th>
<th>R2-adding lanes</th>
<th>IR 471</th>
<th>I-275 to Ohio State line</th>
<th>06-183.00 - Major Widening along I-471 from I-275 to Ohio State Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>602</td>
<td>R2-adding lanes</td>
<td>KY 8</td>
<td>KY 1998 to KY 547 in Silver Grove</td>
<td>Reconstruction and widen by adding 1 lane, sidewalks, and bikepaths</td>
</tr>
<tr>
<td>603</td>
<td>R6-interchange improvement</td>
<td>KY 9</td>
<td>I-275 Interchange</td>
<td>Reconstruction</td>
</tr>
<tr>
<td>604</td>
<td>R2-adding lanes</td>
<td>KY 9</td>
<td>I-275 to US 27</td>
<td>Major widening from US 27 to I-275</td>
</tr>
<tr>
<td>605</td>
<td>BP-bike/ped facility</td>
<td>NEW Northern Kentucky River Path Bike Trail</td>
<td>construct section along KY 8 from Pendry Park through Melbourne and Silver Grove</td>
<td>Pave Shared Use/Bike Trail</td>
</tr>
<tr>
<td>606</td>
<td>R1-new roadway facility</td>
<td>NEW KY 1998 ALSO KENTON CO.</td>
<td>KY 177 to KY 9</td>
<td>New bridge and approach Road to provide access from AA Highway near KY 1998 to KY 177</td>
</tr>
<tr>
<td>607</td>
<td>R1-new roadway facility</td>
<td>NEW KY 536</td>
<td>US 27 to AA Highway (KY 9)</td>
<td>6-352.00 Extension of existing roadway. 3.50 miles in length.</td>
</tr>
<tr>
<td>ID #</td>
<td>Project Type</td>
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<td>DESCRIPTION</td>
</tr>
<tr>
<td>------</td>
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<td>-------------</td>
</tr>
<tr>
<td>608</td>
<td>PT-public transportation</td>
<td>TANK Short Term: I-471 Transit Way</td>
<td>I-471 in Campbell County</td>
<td>Implement shoulder project</td>
</tr>
<tr>
<td>609</td>
<td>PT-public transportation</td>
<td>TANK Long Term: NKU Hub</td>
<td>Northern Kentucky University</td>
<td>Construct a Transit Hub at or near Northern Kentucky University as part of TANK's proposed suburban transit hub network.</td>
</tr>
<tr>
<td>611</td>
<td>R2-adding lanes</td>
<td>US 27</td>
<td>from the Pendleton County to KY 154</td>
<td>6-189.01 - Reconstruction and widening to a 4-lane divided highway</td>
</tr>
</tbody>
</table>

**KENTON COUNTY**

Scheduled Transportation Improvements (funding is committed that will advance the project)

<table>
<thead>
<tr>
<th>ID #</th>
<th>Project Type</th>
<th>FACILITY/PROJECT NAME</th>
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</tr>
</thead>
<tbody>
<tr>
<td>6-162.00</td>
<td>adding lanes</td>
<td>KY 536</td>
<td>Boone County Line to KY 17</td>
<td>Widen to 5 lane urban typical with raised median</td>
</tr>
<tr>
<td>6-17.03</td>
<td>new roadway facility</td>
<td>IR 75</td>
<td>MP 191.277 to 191.777--Brent Spence Bridge</td>
<td>Replace Brent Spence Bridge (see 6-17.04 for additional HPP funding)</td>
</tr>
<tr>
<td>6-344.11</td>
<td>adding lanes</td>
<td>KY 16</td>
<td>I-275 to south intersection of Old Taylor Mill Rd.</td>
<td>Reconstruction of KY 16</td>
</tr>
<tr>
<td>6-344.30</td>
<td>adding lanes</td>
<td>KY 16</td>
<td>Sunbright Drive to Old Taylor Mill Connector</td>
<td>Reconstruct KY 16</td>
</tr>
<tr>
<td>6-344.40</td>
<td>adding lanes</td>
<td>KY 16</td>
<td>Old Taylor Mill Connector to Blackstone</td>
<td>Reconstruct KY 16</td>
</tr>
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</table>

Proposed Transportation Improvements (eligible for federal funding if recommmended in an adopted regional transportation plan)

<table>
<thead>
<tr>
<th>ID #</th>
<th>Project Type</th>
<th>FACILITY/PROJECT NAME</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>606</td>
<td>R1-new roadway facility</td>
<td>NEW KY 1998 ALSO CAMPBELL CO.</td>
<td>KY 177 to KY 9</td>
<td>New bridge and approach Road to provide access from AA Highway near KY 1998 to KY 177</td>
</tr>
<tr>
<td>701</td>
<td>R2-adding lanes</td>
<td>Brent Spence Bridge</td>
<td>I-71/I-75 bridge over the Ohio River</td>
<td>Construct new I-71/I-75 bridge adjacent to the existing BSB with the existing bridge converted to handle local traffic. Bridge and approaches TIP ID 6-17.03 and 6-17.04</td>
</tr>
<tr>
<td>702</td>
<td>R6-interchange improvement</td>
<td>IR 71/75</td>
<td>Buttermilk Pike interchange</td>
<td>Auxiliary lane extension and interchange improvements</td>
</tr>
<tr>
<td>703</td>
<td>R2-adding lanes</td>
<td>IR 75</td>
<td>IR 275 to Buttermilk</td>
<td>Major widening</td>
</tr>
<tr>
<td>704</td>
<td>R2-adding lanes</td>
<td>KY 1072</td>
<td>IR 75 to Henry Clay Ave.</td>
<td>Add 1 lane</td>
</tr>
<tr>
<td>705</td>
<td>R3-major reconstruction</td>
<td>KY 1303</td>
<td>Turkeyfoot Road from KY 536 to Richardson</td>
<td>Reconstruct KY 1303 from KY 536 to Richardson Road West</td>
</tr>
<tr>
<td>706</td>
<td>R2-adding lanes</td>
<td>KY 1303</td>
<td>Dudley to US 25</td>
<td>Reconstruct and widen with bike lane north to end of 4 l lanes and add 2 lanes north of I-275</td>
</tr>
<tr>
<td>ID #</td>
<td>Project Type</td>
<td>FACILITY/PROJECT NAME</td>
<td>LOCATION</td>
<td>DESCRIPTION</td>
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<tr>
<td>707</td>
<td>R3-major</td>
<td>KY 16</td>
<td>KY 177 to Grand Ave (KY 1732)</td>
<td>Reconstruction</td>
</tr>
<tr>
<td></td>
<td>reconstruction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>708</td>
<td>R2-adding lanes</td>
<td>KY 16</td>
<td>Hands Pike (KY 1501) to KY 536</td>
<td>Major widening</td>
</tr>
<tr>
<td>709</td>
<td>R2-adding lanes</td>
<td>KY 16</td>
<td>KY 536 to KY 17 in Nicholson</td>
<td>Major Widening</td>
</tr>
<tr>
<td>710</td>
<td>R2-adding lanes</td>
<td>KY 1829/KY 1486</td>
<td>KY 1839 from KY 1303 (Turkeyfoot Rd) to KY 3035 and KY 1486 from KY 3035 to KY 17</td>
<td>Reconstruction and widen</td>
</tr>
<tr>
<td>711</td>
<td>R2-adding lanes</td>
<td>KY 236 (Stevenson Rd)</td>
<td>KY 1303 (Turkeyfoot) to US 25 (Dixie Hwy)</td>
<td>Reconstruct and widen, address traffic flow and drainage issues from RR Xing to Turkeyfoot Rd</td>
</tr>
<tr>
<td>712</td>
<td>R2-adding lanes</td>
<td>KY 371</td>
<td>Avon Dr to I-71/75</td>
<td>Add 2 lanes with sidewalk</td>
</tr>
<tr>
<td>714</td>
<td>R2-adding lanes</td>
<td>KY 536</td>
<td>KY 17 to KY 16</td>
<td>Reconstruct and widen</td>
</tr>
<tr>
<td>715</td>
<td>R2-adding lanes</td>
<td>KY 8</td>
<td>5th St. from I-75 to Main Street</td>
<td>Widening of 5th St to improve safety and mitigate congestion</td>
</tr>
<tr>
<td>716</td>
<td>R3-major</td>
<td>KY 8</td>
<td>4th Street Bridge over Licking River</td>
<td>Replace the 4th Street Bridge with the same number of vehicular lanes with additional accomodations for pedestrians and cyclists</td>
</tr>
<tr>
<td></td>
<td>reconstruction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>717</td>
<td>R3-major</td>
<td>Truck Access South of I-275</td>
<td>Between the Licking River, KY 177 and KY 16</td>
<td>Locust Pike cannot handle large volumes of heavy trucks because of its narrowness and geometric limitations. Improving connections to KY 177 and KY 16 via Porter and Wolf roads could be another solution to the I-275 truck access problems.</td>
</tr>
<tr>
<td></td>
<td>reconstruction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>719</td>
<td>PT-public</td>
<td>TANK Short Term: I-75/71 Transit Way ALSO BOONE CO.</td>
<td>I-75 and I-71 in Kenton and Boone counties</td>
<td>Implement shoulder project</td>
</tr>
<tr>
<td></td>
<td>transportation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>721</td>
<td>R2-adding lanes</td>
<td>IR 75</td>
<td>US 25 (Dixie Hwy) to KY 1072</td>
<td>Major widening</td>
</tr>
<tr>
<td>ID #</td>
<td>Project Type</td>
<td>FACILITY/PROJECT NAME</td>
<td>LOCATION</td>
<td>DESCRIPTION</td>
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<tr>
<td>801</td>
<td>R2-adding lanes</td>
<td>SR 1</td>
<td>US 50 to Nowlin Av. and SR 1</td>
<td>Realign and widen by adding a lane each direction</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>intersection</td>
<td></td>
</tr>
<tr>
<td>803</td>
<td>R1-new roadway facility</td>
<td>NEW Bright to I-74 Connector</td>
<td>North Dearborn Rd. to I-74</td>
<td>New 2-lane roadway</td>
</tr>
<tr>
<td>806</td>
<td>R2-adding lanes</td>
<td>SR 350</td>
<td>North Hogan to US 50</td>
<td>Widen from 2 to 4 lanes (one lane in each direction) including new bridge over creek. This location was ranked #1 in crash rates for all of Dearborn County by OKI on 12/20/11 (Crash rate=225.9). Leads to high school.</td>
</tr>
</tbody>
</table>
Appendix D

Consultation Comments and Background Information
Chapter 4.
Discussion of Local Strategies for Addressing Major Environmental Concerns

Local strategies are major determinants of how transportation improvements and related
development will affect Regionally Significant Environmental Resources. Local strategies include
regulations, policies, and practices that influence the development process; local regulations
and incentives for stormwater management; and local incentives and priorities for conservation.

The consultations included discussion of local strategies for addressing five major environmental
impacts identified by state agencies in OKI’s earlier consultations. Local agencies were asked
how their counties address environmental impacts related to state concerns that:
forested tracts remain intact,
stream corridors be conserved,
roadway runoff be diverted from direct entry into streams,
- streams not yet degraded be protected, and
the growth of impervious surface be constrained.
...

Conservation of Forested Tracts

Basis for Discussion A shared and major concern among state conservation agencies is that
forested tracts - and other large blocks of habitat - be left undivided... that they should not be
dissected - it's “Better to avoid forest” all together. How is this issue addressed in your county?

Summary of Comments The local development process is not used to conserve forested area,
although some area is conserved by provisions for conserving other resources, such as flood
plains and stream corridors. Local efforts to conserve forested area are primarily those of park
and conservation agencies that are related to acquisitions (funds are limited) and promotion of
state and federal conservation and tax-reduction programs and good management practices.
**Conservation of Stream Corridors**

*Basis for Discussion* Another prevalent concern is for wildlife corridors and habitat connectivity. From a state view, wildlife movement and migration are critical for genetic diversity and can be critical to species survival. Roads are barriers that reduce mobility and increase wildlife mortality – especially for some species. In developed areas, stream corridors can be critical for habitat and travel. The core concern is that streams and greenspace connectivity allow for wildlife travel. How is this issue addressed in your county?

*Summary of Comments* Development decisions do not typically consider impacts on stream corridors and greenspace connectivity. As development occurs, it’s conventional to infill streams or “pipe” them into culverts. In flood plains, development is regulated, but permits can allow for development with or without mitigation. There is, however, increased use of stream buffers to set development back from the stream edge in order to better manage stormwater, which also benefits wildlife.

**Diversion of Roadway Runoff from Streams**

*Basis for Discussion* There was discussion by state agencies of the need for highway projects to avoid infringement on riparian zones. Comments were that the potential for adverse impacts is exacerbated on roadways adjacent to a stream – that “roadways are pathways for salt and contaminants” and that runoff creates “changes to stream temperature and velocity.” One concern is that roadway runoff be diverted from direct entry into streams. How is this issue addressed in your county?

*Summary of Comments* Contrary to being diverted from streams and rivers, roadway runoff is commonly discharged to them directly from curb-and-gutter systems and is a source of local stream pollution and stream channel degradation. For existing roads in developed areas and for new roads -- even in rural areas -- curb-and-gutter is standard practice. The environmental impacts and financial costs of managing roadway runoff could be reduced through greater use of alternative practices, but this is a back-burner issue for local agencies. For state and federal highways, state transportation departments are responsible for determining how roadway runoff is managed. The continued use of conventional practices has enormous implications for local streams. Reconstruction and expansion projects provide opportunities for managing stormwater so that environmental impacts are reduced or even repaired (discussed in Section 3).
Protection of the Least Impaired Streams

Basis for Discussion We heard that “Any relatively un-degraded stream has as much potential conservation value as any other.” The concern is that streams not already impaired be protected in the development process. How is this issue addressed in your county?

Summary of Comments Local development and stormwater management regulations do not differentiate for stream conditions. Project negotiation may help conserve a stream segment that is unaltered or high quality, but the development process does not account for the environmental value or scarcity of such streams nor the implications of the observation that “It’s cheaper to avoid an impact than to mitigate for it.” The need to protect the least impaired streams is further obscured by the fact that stream degradation tends to be a cumulative process.

Constraints on Impervious Surface

Basis for Discussion The development impact that may be of greatest concern is the growth of impervious surface. There appears to be a direct correlation between water quality and pervious surface. The literature refers to imperviousness above 10% of a watershed as the beginning of species loss and over 25% as degradation -- and it’s hard to bring water quality back after there is too much impervious cover. The concern is that impervious surface be limited in the development process. How is this issue addressed in your county?

Summary of Comments Local development strategies include options but few incentives for reducing impervious surface. Stormwater management agencies are interested in strategies to reduce impervious surface that adds water to their sewer systems, but areas where stormwater reductions are most needed are areas that are most developed. Efforts to reduce impervious surface in developing areas are limited. Roadway width is a major factor contributing to impervious cover, but there is little agreement on appropriate widths among local agencies with different responsibilities. Parking lot size is another factor that affects impervious cover.

Chapter 5.
Discussion of Five Strategies for Reducing Environmental Impacts

Green Infrastructure for Stormwater Management

Basis for Discussion State agencies discussed the need for low-impact development and green infrastructure for reducing stormwater impacts -- for greater use of rain gardens, trees, flood plains, etc. to detain and filter runoff before it enters streams. Could requirements or incentives for low-impact development and green infrastructure help to better conserve your county’s most significant Environmental Resources?
Summary of Comments
Low-impact development (LID) and green infrastructure can reduce stormwater’s adverse environmental impacts and may lower certain costs, but greater implementation at the local level depends on more incentives and local performance data. These strategies, which include the use of alternative best management practices for managing stormwater (alternative BMPs), are allowed in many of the region’s developing and re-developing areas but are not widely used. Implementation is slowed by uncertainties about performance, cost, and maintenance and a reluctance to use the unfamiliar. Local demonstration projects, testing, and leadership are facilitating greater use of LID and green infrastructure, but bigger incentives are needed to expand interest and counter the use of conventional practices.

Integration of Best Practices into Development Codes

Basis for Discussion
It was mentioned that “The best practices are often precluded by existing codes and ordinances.” Are there “best practices” that are deterred by existing codes or ordinances, or changes needed to existing codes to promote certain “best practices”?

Summary of Comments
Integration of alternative best management practices (alternative BMPs) into development codes would increase their use, but code changes of any kind are difficult to implement. Regardless of their potential to reduce environmental impacts and financial costs, changes to zoning and subdivision codes are hindered by the amendment process and by a general lack of understanding of development costs and environmental resource value. Another option for increasing the use of alternative BMPs involves negotiating their voluntary use with developers.

Comprehensive Plans

Basis for Discussion
OKI actively promotes the development of comprehensive plans. Transportation projects consistent with comprehensive plans are awarded extra points that enhance their chances for funding. How could comprehensive plans be more effective for conserving high-quality resources?

Summary of Comments
“The comprehensive plan is a toolbox, but it’s not a strong toolbox for environmental resources.” Comprehensive plans would be more effective for protecting environmental resources if they had stronger conservation elements, but their effectiveness is inherently limited by their role as guidance documents.
Conservation Easements

*Basis for Discussion*  For high-quality resources, it was suggested that area needs to be acquired that is to be protected, in order to offset concerns about “taking land out of development.” It was suggested that local entities take more initiative to inform property owners of tax benefits and assist with conservation easements -- and that even modest financial incentives could increase conservation. If property owners had more information and assistance, could high-quality resources be better conserved? Is this a feasible strategy for conserving significant resources?

*Summary of Comments*  Local agencies promote and facilitate conservation easements, but this strategy is not likely to be widely used without larger financial incentives. More information could increase interest in establishing easements, but property owners can become discouraged by the process and the low level of financial compensation in comparison to the costs of establishing easements and their land’s loss of development rights. A reduction in property tax might be one option for increasing easements.

Watershed Planning

*Basis for Discussion*  There were strong suggestions for a watershed perspective for considering stream impacts from impervious surface -- that watershed boundaries be used for planning and zoning and as the basis for development and conservation decisions. Comments were for decreasing impervious surface by clustering infrastructure around developable areas, and providing open space and protecting sensitive areas for their importance on a watershed scale. Is it feasible to plan development and protect environmental resources on a watershed basis? Could watershed planning protect your county’s Regionally-Significant Streams?

*Summary of Comments*  Watersheds are viewed as impractical for land use planning and zoning because of the need for cooperation among multiple jurisdictions, but they are being used increasingly for stormwater management and other types of planning. Watershed-based initiatives and collaboration appear to be increasing while the challenge remains of how to guide the development process on a watershed basis.

See Chapters 4 and 5 for discussion comments and the following:
Table 2 Local Forest Protection Strategies
Table 3 Local Stream Corridor Protection Strategies
Table 4. Land Practices for Managing Roadway Runoff
Table 5. Local Strategies for Reducing Impervious Cover
Table 6. Local Stormwater Runoff Reduction Strategies
Table 7. Jurisdictional Authority of County Comprehensive Plans
Appendix D-2
Consultation Comments on Selected Regionally Significant Environmental Resources

THE GREAT MIAMI RIVER warrants greater protection in response to local interest in its conservation.
ODNR Presentation (selected comments) related to the above statement
- The number of groups that support the river’s conservation indicate that “the bar for river protection needs to be raised.”

THE LITTLE MIAMI RIVER’S environmental value and economic benefits are jeopardized by the continued growth of impervious surface.
ODNR Presentation (selected comments) related to the above statement
- Adds $8 million annually to the economy.
- Includes 88 miles of Exceptional Warmwater habitat, 23 state endangered or threatened species, and 6 canoe liveries.
- At the turning point/on the threshold: water quality decline begins at 10%, and watershed is now at 8-12% imperviousness
- Assimilative capacity is mostly divided up: river may be able to assimilate more, but how much impervious surface equates to 6 mgd additional sewage flow?
Consultation Comments related to the above statement
- Greater impacts on the Little Miami perhaps come from tributaries – from the effect of impervious surfaces.
- Federal and state Scenic River designations provide limited protection to the Little Miami River.

LAUGHERY CREEK’s slopes are valuable for forest cover and reforestation potential, and its waters provide good aquatic habitat upstream of the impounded area.
OKI Presentation (selected comments) related to the above statement
- Laughery Creek attains its designated use as warmwater habitat for about a third of its length in Dearborn County
- Watershed is more forested and less developed than most watersheds in our Region
Consultation Comments related to the above statement
- Dearborn County part of corridor/watershed not developed and highly aesthetic
- Dearborn County part of corridor/watershed has steep slopes and forested area (maybe opportunity to conserve forested tracts not farmed, but a lot of forest is being cleared for pastureland, and 5-acre lots are encroaching -- seeing land divisions into smaller tracts and clearing of trees. Areas with lack of sewers and steep slopes are more likely to remain forested.)
- Stream is popular for canoeing and for aesthetic experience
- Because drainage area is not yet developed, there is opportunity to protect streams not yet degraded and species that may need protection – opportunity to get in front of development
- There is potential to conserve in Dearborn: not much development, steep slopes
- Two mussels species of state concern probably upstream of Dearborn County where stream is free-flowing (Dearborn Co. segment’s habitat value affected by Ohio River dam)
- Concerns about septic system effluent and other pollution sources.
- Hayes branch has several issues, including mercury
THE LICKING RIVER’s water quality warrants protection from activities that would contribute to future need for restoration. Activities that impair water quality include runoff discharges directly to streams, stream channelization or alteration, removal of riparian vegetation, in-stream structures, and activities that result in sedimentation and algal blooms.

KDOW Presentation (selected comments) related to the above statement
- Water quality is good enough to provide habitat to threatened and endangered and sensitive species.
- Streams that do not support aquatic life need to be restored as well as protected.
- What we do on the land impacts our water quality: parking lots and impervious surface with runoff into storm drains that discharge directly to streams, channelization throughout N Ky and moved streams (also in agr areas), removal of riparian vegetation along stream, fertilizer applications, in-stream structures like low dams, activities that result in sedimentation and algal blooms (as die off, produce drops in DO)
- Restoration is not an easy answer: The cost of repairing damaged ecosystems is high and restoration has a low success rate.
- If resource is in good shape, then it’s important to protect it.

THE OXBOW’s vulnerability to the development impacts of increased runoff may be best offset by a buffer.

OKI Presentation (selected comments) related to the above statement
- It’s not just the variety of species and numbers of birds that distinguish this area (2500 acres), but also the rarity of species for which occurrences and sightings are reported.
- Another perspective on the Oxbow’s importance, as mentioned by a participant in previous consultations, is that the potential to recreate the Oxbow is virtually nonexistent.

Consultation Comments related to the above statement
- Expect the Oxbow to suffer from runoff, especially in relation to the casino on the southwest side and I-275. The power plant is also adjacent to the Oxbow.
- For projects in the watershed that increase impervious surface, a buffer helps, but impervious surface can have major impact.
- Need a buffer around the Oxbow.
- Mitigation has been used to buffer the Oxbow (IDEM has several mitigation sites abutting the area to create a buffer without development) and allow areas to revert to natural state. Good mitigation sites are areas that have been wetlands in the past and then degraded (most likely to be successful). There’s very little wetland to start with in this part of the state – they’re associated with large stream bottoms. Mitigation can be used to restore parts of these areas.
- Suggestion to put conditions on levy projects.
- Question is: how Oxbow Inc. can mitigate for adverse effects?
- Encroachment by development is not likely to be a problem in the future (casinos have encroached about as far as they can)
- Whatever development is west of the Oxbow is likely to stay west, except for Hardintown. What’s been developed will stay developed (sand and gravel operation, auto body shop, storage).
- In March, Hardintown proposed for a waste disposal transfer station which is of concern to Oxbow, Inc. Hardintown is so close to the floodplain that project requires a permit. Is only site in Hardintown with potential for development.
- Threats maybe from highway construction, but opportunity for conditions to be included in project reviews.
- County Planning and Zoning has worked with Oxbow, Inc. -- they’re the experts. They work with the Lawrenceburg Conservancy District (both organizations have financial resources).
THE WHITEWATER RIVER is distinguished in both Indiana and Ohio for its quality and recreational use.

OKI Presentation (selected comments) related to the above statement
- Dearborn County part of the Whitewater River fully supports its designated use as warmwater habitat in the mainstem below Logan Creek, and so do nine tributaries -- and it provides habitat for diverse and rare species: 1) variegated darter (state endangered) 2) cobblestone tiger beetle (state endangered, globally imperiled)
- Ohio segment of the Whitewater River is designated as Exceptional Warm Water habitat – meaning that it’s capable of supporting endangered and rare species – and the mainstem attains that use.
- Ohio antidegradation policy classifies the Whitewater as Superior High Quality Water

Consultation Comments related to the above statement
- One of the best rivers and watersheds in Indiana for water quality -- more full attainment in the Whitewater River watershed than others
- One of Indiana’s most heavily used streams for recreation
- One of the best sites in Indiana for canoeing
- Variegated darter: indicator of good quality throughout the Dearborn County segment, darter identified in mainstem but probably occurs also in some tributaries, may not have associated species
- Cobblestone tiger beetle is globally rare

ODNR Presentation (selected comments) related to the above statement
- Whitewater River supports an exceptional biological community
- Popular for recreational use (two canoe liveries, popular for paddling)
Appendix D-3
Consultation Comments on Types of Local Resources

FLOODPLAINS  The cumulative effect of state-level approvals of project development and cut-and-fill practices in floodways has increased flooding and reduced floodplain area in Dearborn County.

Consultation Comments related to the above statement
- Dearborn County has a lot of floodways and floodplains that have been filled. Development is occurring that involves cutting down hills and filling in valleys – it’s prevalent along the Ohio River and other streams (example of fill in Tanners Creek floodway). Development occurs in the floodplain. There’s been more flooding downstream because of more filled-in areas. IDNR Division of Water issues the permits to allow these practices, and the Corps.
- County permits are insignificant compared to the state. Dearborn County staff have been surprised by permits issued (a creek that’s going into a wastewater treatment plant?). Local officials have informed the state that it’s a problem.
- Fill is taken from one side of U.S. 50 and placed on the other side....Fill has been placed up to the edge of Wilson Creek (up to 2/3 feet to the edge).

HEADWATER STREAMS  In developed areas, the elimination of headwater streams has caused stormwater problems and habitat loss; developing areas could protect headwater streams and realize the benefits.

Consultation Comments related to the above statement
- Feeder streams are gone – they’re in pipes. / In most urbanized streams, tributary drainage is almost completely gone, which poses a serious challenge in rain events. Water quality is compromised by runoff in urban areas.
- Communities need to be more aware of the beneficial aspects of cold water headwater streams (will be increased in importance soon). Primary headwater streams need protection.

POTENTIAL TARGETS FOR CONSERVATION  State agencies want to support conservation for areas that are locally-selected; good conservation targets include areas that have already received public funding, such as mitigation project areas and watersheds with “319” planning grants.

Consultation Comments related to the above statement
- From state perspective, desire is for “focused” conservation areas – want to focus spatially on a place.
- Focus conservation on where development is not happening. Pick a target area for using these tools to conserve a place.
- Whitewater River has a lot of potential for conservation and development. Might use trails to conserve.
- Potential for focus would be 1) mitigation areas and 2) Oxbow
- Focus mitigation efforts/projects
- Focus could be watersheds – or areas in watersheds -- that have received grants/multi-grants = areas where work has been done (e.g., 319 projects have focused efforts and pursued additional grants)
- Areas with advantage for conservation are those without a lot of meaningful habitat (rare species), lack of sewers, slopes
RARE SPECIES Rare species may be more prevalent in Dearborn County than data indicates.
Consultation Comments related to the above statement
- Rare plants are likely to be more prevalent than reported (county has a lot of natural habitat)
- For aquatic species, the state rare species list is not a good indicator, but [the state aquatic biologist for non-game species) is the one to answer this question about the possibility of rare species not yet identified.

RIPARIAN CORRIDORS Riparian corridors are good targets for conservation efforts.
Consultation Comments related to the above statement
- Communities need to be more aware of the beneficial aspects of corridor preservation.
- A lot of what would protect streams would protect aquifers.
- Farmers often have "problems" with/remove trees that are along streams.
- Ash is heavy in stream corridors – we’re going to lose the ash. The emerald ash borer has taken over.
- In rural areas, easements from farmers can provide large tracts alongside streams. Then when the area is developed, still have the easement. / Agricultural easements are easy to get along stream corridors and this protects against future land uses. This is the easiest way to gain large amounts of land.
- Conserve stream corridors is important for hunting and fishing
- Conserve stream corridors. Most rare species reside along stream corridors

TREES AND FORESTED AREAS Tree loss will be increasing from the effects of invasive plants and insects – in conjunction with environmental, financial and visual impacts – and from the effects of soil compaction and topsoil removal in the development process.
Consultation Comments related to the above statement
- Dearborn County has a lot of forest clearing for pastureland, and 5-acre lots are encroaching (seeing land divisions into smaller tracts and clearing trees).
- Areas with a lack of sewers and steep slopes are more likely to remain forested.
- Butler County has some valuable tracts of trees, but they’re infested with tree-of-heaven or honeysuckle. In addition, the emerald ash borer has taken over, and there are other exotic issues making a dramatic impact on forest quality.
- I receive a lot of calls about trees dying. Trees are not surviving past 15 years in areas where soils were scraped off. After about 15 years, trees move from juvenile to mature – the root system changes (trees are not just above the ground but are also below the ground). Importance of removing macro pores, competition for nutrients, planting in subsoils – under these conditions, trees will not grow more than 15 years. If you remove topsoil, it does not come back. But just leaving the topsoil doesn’t work – need to leave the topsoil alone. Poor soil conditions prevent trees from growing large because of competition and nutrient issues. Leave soil alone during development.
- Anywhere there’s a creek, there’s a lot of ash, which means tree death in the next few years. Trees that fall will block up streams. There are big volunteer efforts to clear the trees, based on experience further north. Honeysuckle will fill in. It will change Ohio’s appearance and cause changes in the landscape and for wildlife. Pear and honeysuckle and tree-of-heaven are major pests, with pear as the worst. Honeysuckle prevents succession and affects water quality, for there is no undergrowth for holding the soils. In undisturbed woods, honeysuckle has become established along the watercourses. With honeysuckle there is less leaf litter, so runoff is faster and __. Upcoming changes have implications for wetlands and parks. Need to be involved if want trees. Honeysuckle just takes over everything. It’s even in deep forested areas now.
- 20-year average life span for urban trees in areas developed after World War II since practice has been to scrape off topsoil
- West Chester has short tree life not because of disease but because of soils. Planning allows it.
Appendix D-4

Comments on the Feasibility of Addressing Major Environmental Concerns

The “major concerns” about transportation's environmental effects (impacts on environmental resources from transportation projects or related development) are to:

▪ retain forested tracts,
▪ conserve stream corridors (maintain corridor connectivity),
▪ divert roadway runoff from direct entry into streams,
▪ protect streams not yet degraded, and
▪ constrain the growth of impervious surface.

The feasibility of retaining forested tracts is greatest in areas least suited for development; tree and forest retention is hindered by public policy and public understanding, maintenance and development practices, and invasive plants and insect infestations.

The feasibility of retaining forested tracts is greatest in areas least suitable for development, such as steep slopes, wet soils, and unsewered or publicly-owned areas. The region's forested areas tend to occur where land is not desired for other uses; “many areas that are already forested are that way because there are no feasible land uses.”

The use of public policy to protect trees and forested area is hindered by a general lack of understanding of the financial value of the functions performed by these resources. For example, development decisions and project design typically don’t account for the role of trees in managing stormwater, stabilizing streambanks or hillsides, and moderating temperatures and air pollution, nor for the connection between these functions and their respective financial costs. Transportation and other public development projects tend to view natural areas as “paths of least resistance” and lowest cost, as exemplified by removal of more than 5,000 trees planted by Cincinnati Parks in lieu of adjusting a railroad line as part of the I-75 expansion. In rural areas, forested tracts are not necessarily managed for their timber value (income can be comparable to agricultural products) and continue to be cleared for pastureland or subdivided for conversion to large-lot developments. The comment “protecting forested tracts would be very difficult” was made in the context of public and political perception of trees and their conservation value.

The outlook for tree and forest retention and expansion is challenged by poor tree maintenance, development practices, insect infestations, and invasive species. In many developed areas and along public streets, the long term growth of tree plantings is jeopardized by poor planting and development practices involving topsoil removal and soil compaction. In some places, poor maintenance practices such as volcano mulching and restrictions under utility wires are other factors contributing to poor tree canopy health. Trees conserved on private and public lands may be at risk from insect infestation or invasive plants. Reforestation is becoming more
expensive and retention is becoming more difficult because of honeysuckle, pear, and other invasive species.

Consultation Comments related to the feasibility of retaining forested tracts
- Protecting forested tracts would be very difficult.
- Natural undeveloped areas usually offer the path of least resistance to transportation projects. ODOT’s intention to remove part of a forested hillside at Mt. Storm Park rather than adjust a railroad line’s placement is a prime example of this. At the Mitchell Avenue exit along the Mill Creek, ODOT has already removed 5,000 trees that had been planted by Cincinnati Parks and project partners.
- We’re seeing less retention of forested tracts because of the costs involved -- and it’s becoming more difficult because of invasives.
- Many areas that are already forested are that way because there are no feasible land uses.
- Farmers don’t like trees, even along streams. Farmers often have “problems” with trees that are along streams because of drainage issues.
- EABs (emerald ash borers) are everywhere. Butler County has some valuable tracts of trees, but they’re infested with tree-of-heaven or honeysuckle. Ash is heavy in stream corridors – we’re going to lose the ash. EAB has taken over, and there are other exotic issues that are making a dramatic impact on protected forest quality.
- If we assigned monetary values to natural resources, we would retain more forested tracts. We should identify the costs and steps for mitigating the removal of forested tracts and other environmentally sensitive areas.
- Real estate costs persuaded ODOT to choose Mt. Storm Park land over railroad property for highway right of way. Can we revise state laws to place a higher monetary value on rare forested land in the city?
- We need to equal out the scales so forested land is not always the path of least resistance for a transportation project.
- We don’t have a way to assign a monetary number to an urban forest, which cuts stormwater management costs.
- Cincinnati has a code to protect and value trees. But neither the state nor Duke Energy recognize that code.
- Trees have a large impact on storm loads.
- I receive a lot of calls about trees dying. Trees are not surviving past 15 years in areas where soils were scraped off. After about 15 years, trees move from juvenile to mature – the root system changes (trees are not just above the ground but are also below the ground). Importance of removing macro pores, competition for nutrients, planting in subsoils – under these conditions, trees will not grow more than 15 years. If you remove topsoil, it does not come back. But just leaving the topsoil alone doesn’t work – need to leave the topsoil alone. Poor soil conditions prevent trees from growing large because of competition and nutrient issues. Leave soil alone during development.
- 20-year average life span for urban trees in areas developed after World War II since practice has been to scrape off topsoil.
- West Chester has short tree life not because of disease but because of soils. Planning allows it.
- On public lands, the most feasible [goal is to retain forested tracts]. Leave forested area alone – it doesn’t cost anything.
- There is value for tree/air quality, and value for wildlife habitat.
- The ecological service that land gives: value of trees, retaining rainwater, habitat for native species.
- [Response to Q on most feasible] Forested tracts maybe, because it’s not farmed – but there is a lot of forest clearing for pastureland. Five-acre lots are encroaching. Areas with lack of sewers and steep
slopes are more likely to remain forested (southwest part of county). We're seeing land divisions into smaller tracts and the clearing of trees.

- Example of tree ordinance for Indianapolis to conserve forest in areas generally difficult to farm, such as too steep or wetland (which is where most of forested area is located), but business sees it as restrictive – hard to conserve in progressive counties, let alone in conservative areas
- [follow-up to previous comment] Areas with advantage for conservation are those without a lot of meaningful habitat (rare species), lack of sewers, slopes.
- Clarify the connection between reducing forest cover in watersheds and downstream flooding – importance of educational tools.
- Maintenance is important – keep forested [land] in forest.
- Indiana Classified Forest program has had some success. Most people participate in the program for tax reasons, but you can make money from forest as a crop, same as corn. Forested area can be managed to make money (based on personal experience
- Anywhere there’s a creek, there’s a lot of ash, which means tree death in the next few years. ... Honeysuckle will fill in. It will change Ohio’s appearance and cause changes in the landscape and for wildlife. Pear and honeysuckle and tree-of-heaven are major pests, with pear as the worst. Honeysuckle prevents succession and affects water quality, for there is no undergrowth for holding the soils. In undisturbed woods, honeysuckle has become established along the watercourses. With honeysuckle there is less leaf litter, so runoff is faster. Upcoming changes have implications for wetlands and parks. Need to be involved if want trees. Honeysuckle just takes over everything. It's even in deep forested areas now.
- Some areas along roadways are reforested, but ODOT has no interest in trees. In Michigan, the interstates/roadways are bordered by trees, but ODOT says no to trees along roadways because of safety. Studies show that road rage drops with trees. Maybe need to expand tree plantings in median and cloverleafs, but there may be concern about the deer population

The feasibility of conserving stream corridors depends largely on greater use of stream buffers, which are “probably the single best management practice that could be put on the ground,” and reduced use of culverts and stream piping.

Local counties have established or considered stream buffers to different degrees; county requirements vary widely and could be more effective in every case. The value of stream setbacks includes reducing public sector costs through their roles in flood control, stormwater management, habitat, water quality improvements, aquifer protection, and other beneficial functions, but their implementation is hindered by a general lack of understanding of their benefits and concerns over perceived “taking.” Stream buffers can also help address the other major environmental concerns considered in the consultations – they provide space for forested area and green infrastructure, protect high quality streams, and reduce impervious surface impacts.

Consultation Comments related to the feasibility of conserving stream corridors
- Maybe [Butler County] zoning codes could do better at recognizing natural resources that are valuable to preserve. Butler County stream buffers do this, but they are based on pre-set distances rather than stream water quality.
- Stream ordinances have a lot of promise because there are so many benefits to protecting stream corridors. It’s the most important way of protecting habitat.
- Conservation easements have a lot of potential, in both urban and rural areas. In rural areas, easements from farmers can provide large tracts alongside streams. Then when the area is developed, still have the easement. Need for easements to focus on corridors. The problem is holding the easement, and that the farmer wants more money (which makes him more willing to establish the easement). Agricultural easements are easy to get along stream corridors and this protects against future land uses. This is the easiest way to gain large amounts of land
- Hamilton Co. has stream buffer regulations, but they're not strict
- Preference for the second bullet: Conserve stream corridors and maintain corridor connectivity.
- The state can only recommend measures like buffer zoning to local governments. ODNR's advocacy of buffer zoning was rejected by a board of township trustees who were responding to citizens saying no.
- Warren County's zoning code rewrite has stream setback regulation, but they had to be watered down to voluntary because of pushback, even from building departments. People talk about “taking.” Lots are considered buildable that would be rendered unbuildable because of setbacks. Zoning is for enabling public safety health and welfare -- some argue that setbacks won't hold up as enabling legislation. Warren Co. SWCD has identified blueline streams and recommended 50'/75'/100'/300' setbacks for development. SWCD would review on a site-by-site basis. There's a disconnect between big picture water quality and how local regulations and stream buffers will have an impact.
- Stream buffers have been great for Butler County, but still have some issues (cover the whole county – second order streams and larger).
- [Response to question about best strategies for addressing the listed concerns] Riparian setbacks
- Need to make communities aware of the beneficial aspects of corridor preservation -- especially cold water headwater streams.
- A lot of what would protect streams would protect aquifers.
- Stream buffer is probably the single best management practice that could be put on the ground/best environmental protection strategy is stream setbacks.
- Stream setbacks-- not enough staff to regulate.
- Environment is not a priority for a lot of people in Kenton County. We don’t combine our efforts. Jump to regulations. Will take time and awareness efforts to get information out. Then think about stream buffer requirements. No support now. / Difficult to make stream buffers a priority for local agencies – beyond being in subdivision regulations – needs to be an item of public education.
- #2/Conserve stream corridors is the one most effective. It not only provides buffer for stream but is integral to stream habitat, and mitigates pollutants. Riparian buffer zones as valuable. Gets into people’s perception. But, it goes against the preference for a “manicured look,” and against people who fear snakes (natural vegetation provides habitat for snakes, which raises public outcry).
- Agree on #2/Conserve stream corridors. Most rare species reside along stream corridors -- running buffalo clover is in buffer strips, redback salamander occurs in only this part of Kentucky.
- #2/Conserve stream corridors is important for hunting and fishing.
- New stormwater regulations have requirement for 25’ or 50’ buffer on stream, depending on quality of stream. Is that wide enough [for habitat protection]/does it help?
- [Response to preceding comment:] It’s a start.
- Stream buffers are in effect now for new construction or residential development – construction is to maintain a buffer, via construction permit
- Proper buffer should have trees and shrubs and not just lawn
- University of Kentucky has researched vegetation appropriate for riparian zones/stream restoration/native and non-native and invasive species. Kentucky Horse Park has a good demo of a restored stream corridor.
- Lexington Masterson Stations Park has stream restoration project visible from road that is a model for restoration with community buy-in.
- We continue to add roads, which increases impervious surface and new development. Need to look at conserving stream corridors and establishing riparian buffers and making improvements along existing roadways. Consider maintenance issues, and increase in water quality benefits.
- State incentives: If state made all of these policies and gave money to implement them – if they made steam buffers mandatory -- it would make our lives easier.
- [We] don’t have code in place that requires easements or conservation area for sensitive areas. Current codes do not require conservation.
- Looked into establishing ordinances for riparian corridors a few years ago. Issue is how to define the corridor. Could revisit this.
- The middle 3 bullets are most attainable for Dearborn County (but most of development is in urban areas): conserve stream corridors, divert roadway runoff from direct entry into streams, protect streams not yet degraded.
- "Conserve stream corridors" is one of the three most attainable of these five for the county (in combination with "divert roadway runoff" and "protect streams not yet degraded").
- Riparian corridor ordinance discussions in Dearborn County (generally along stream corridors) would address most of the bullets.
- Want to revisit Riparian corridor ordinances and some level of interest for support (setback, easement), but not at the top of the list for now.
- What are the best (most effective) strategies for addressing these concerns? Stream buffers are a good place to start.
- [Need for] Legal educational material to justify stream setbacks.
- Stop piping of streams
- Culvert impacts are a concern -- culverts can fragment streams by prohibiting passage of organisms. Incentives are needed to reduce use of culverts/practices and design with adverse impacts. Trying to get ODOT to change standards...

**Green infrastructure makes it technically feasible to “divert roadway runoff from direct entry into streams,” but greater use of green infrastructure depends on changes in regulations (to strengthen requirements or incentives).**

Green infrastructure provides the capability to avoid discharging unfiltered, high temperature runoff into streams or entering storm and combined sewer systems. The technology has been used in some roadway projects and is effective and do-able, but its greater use appears to depend on changes in development or stormwater regulations that provide incentives or requirements.

**Consultation Comments related to the feasibility of diverting roadway runoff from direct entry into streams**
- The third one/easements – to divert roadway runoff from direct entry into streams (from existing or new roads) – could be done through local zoning regulations/is an engineering [procedure] that could be done through zoning.
- Like the strategy: "Divert roadway runoff from direct entry into streams"
- #3/Divert roadway runoff from direct entry into streams and #4/Protect streams not yet degraded) are easier to achieve [than the other three]
- Only #3/Divert roadway runoff from direct entry into streams is feasible / #3 is most feasible
- Went with #3/Divert roadway runoff from direct entry into streams as low-hanging fruit – more do-able – may be easier to do if regulated - may be part of KYTC MS-4 permit, in time
- Talk about item #3/Divert roadway runoff from direct entry into streams, but how to achieve?
- #3 (Divert roadway runoff from direct entry into streams) because of potential offered by public roadways.
- (In response to: What do you think are the best strategies for addressing these concerns?) Don’t allow pipes to discharge directly to streams -- allow stormwater to get to the stream but not directly. Figure out a way to provide for retention of roadway runoff so that pollutants are filtered.
- Water needs to collect into containment system rather than going direct into stream or reservoir. Permit for ODOT is contingent upon structure.
- One of the three most attainable (in combination with “conserve stream corridors” and “protect streams not yet degraded”)

**It’s feasible to protect streams not yet degraded in terms of opportunity and technology, but it’s not clear how that protection might occur.**

Ohio and Kentucky have some measures in place to help protect this region’s high quality rivers or streams. At the local level, zoning can be used to establish buffers for protecting streams, but zoning may not be applicable for protecting streams based on differences in quality. Steps toward better protection would include increased local awareness of the locations of high quality streams and improved public understanding of the financial costs of stream restoration compared to stream protection.

**Consultation Comments related to the feasibility of protecting streams not yet degraded**
- Opportunity to protect streams not yet degraded because the drainage area is not yet developed – there is opportunity get in front of development.
- One of the three most attainable (in combination with “conserve stream corridors” and “divert roadway runoff…”)
- “Protect streams not yet degraded is easiest to achieve” and “Divert roadway runoff from direct entry into streams”
- But for new roads, don’t have stream crossings.
- Transportation/KYTC is very aware of those streams now. Take special construction processes if needed, such as bridge span / KYTC is more aware of these OSRW streams and have guidance for how to approach projects -- progress is occurring.
- For targeting conservation practices? It’s important to know which streams have the highest quality, because zoning codes are applied uniformly (per state requirement), but might look at [resources] differently if knew where there is high quality. ... It would be useful to know which local streams have higher quality.
- Needs to be a better understanding of economic costs of “protect the streams not yet degraded” – OKI can help show economic benefits/costs and local examples to share. Consider cost of maintenance and cost to property owner, and stormwater management issues.
- Culvert impacts are a concern -- culverts can fragment streams by prohibiting passage of organisms. Incentives are needed to reduce use of culverts/practices and design with adverse impacts. Trying to get ODOT to change standards...
- ODOT is required to use certain standards for crossings of high quality streams/sources.
- Always: protect what’s good instead of becoming something to be restored / protect what is good before needing to fix it.
- [We] don’t have code in place that requires easements or conservation area for sensitive areas. Current codes do not require conservation.
- How can zoning be applied to preserve water quality? How is that enforceable per current law? Develop information on legal basis to apply zoning for conservation and for [protecting] stream quality

**It’s technically feasible to constrain the growth of impervious surface by installing raingardens, pervious surfaces, and other best management practices, but green infrastructure is not widely used.**

Local agencies may advocate impervious surface constraints as “best” strategies for protecting environmental resources, but they do not always effectively promote or require them. Suggestions were to advance the use of conservation design or requirements for stormwater BMPs, or use stormwater management programs to mitigate rather than constrain the growth of impervious surface, or develop a more standardized approach to stormwater management so that jurisdictional variations are reduced and environmental protection is expanded.

**Consultation Comments related to the feasibility of constraining the growth of impervious surface**
- Constraining impervious surface is not happening – Planning & Zoning is limiting impervious surface to a degree, but not doing all we possibly can – Jennifer keeps track for R5...
- Impervious surface/#5 is the most important to address -- but to mitigate the impact of impervious surface rather than constrain the growth
- [In response to: What do you think are the best strategies for addressing the concerns listed here?): Mitigate the impacts of impervious surface – a different version of #5/Constrain the growth of impervious surface
- [In response to: What do you think are the best strategies for addressing the concerns listed here?): Addressing#5/Constrain the growth of impervious surface – it helps address #2/Conserve stream corridors and #4/Protect streams not yet degraded
- [In response to Q about feasibility]: Controlling the growth of impervious surface – new technologies make it increasingly feasible, e.g. raingardens, increased pervious surfaces, and implementation of BMPs.
- [In response to Q about feasibility]: Constraining the growth of impervious surfaces is the most encompassing [of the major environmental concerns or goals]/addresses all the others.
- Agree on [the importance of] reducing the growth of impervious surface -- but can’t stop it.
- Trying to encourage the design option to decrease impervious surface and preserve natural systems. Warren County has maximum density to constrain impervious surface but does not have maximum parking. Conservation design options would have incentives built in, e.g., would tie subdivision regulations to density.
- Greater impacts on the Little Miami perhaps come from tributaries – from the effect of impervious surfaces.
- Concern that developers will just go over to the next county/town. Regional approach to standardize regulations. To address local concerns about losing development, need regional approach for economic development (include legal precedent)
- A more standard set of regulations for stormwater and erosion control among counties, municipalities. A stormwater permit for special areas … a standard set of guidelines for stormwater guidance.
- Unless stormwater BMPs are required, there will be no mass scale expansion
Appendix D-5

Consultation Comments on the Effectiveness of Federally-Based State Environmental Protection Programs

319 GRANT PROGRAMS (for implementing state Nonpoint Source Management Programs) are viewed as both beneficial (for conservation) and burdensome (for administration).
Consultation Comments in following sections:
- OHIO SURFACE WATER IMPROVEMENT FUND (SWIF) GRANT
- KENTUCKY 319 GRANT PROGRAM
- INDIANA 319 GRANT PROGRAM

401 CERTIFICATION provides state perspective on the need to protect wetlands and other water resources from development impacts (related to the disposal of dredged or fill material). See a following section for comments on the INDIANA 401 CERTIFICATION PROGRAM.
Indiana Presentation (selected notes)
- Permit accounts for: why is that area worth protecting?

AGRICULTURAL PROGRAMS (for assisting private landowners to conserve natural resources) would be more effective if funding were targeted to problem areas.
Consultation Comments
- Agricultural programs have been a shotgun approach to willing farmers. A lot of participants were good farmers to start with. Maybe they should target the worst/problem areas. Agricultural programs are examples of how money is not focused on areas that need the most help.
- Programs need to focus more on problem areas. There are programs to target good - stewards, and to problem areas.
- Equitable incentives don’t solve problems.
- USDA programs are most beneficial for getting money on the ground -- USDA money is the easiest to get. The issue is how to channelize planning, programs, and priorities.
- Dearborn County does not have any sites in WRP/Wetlands Reserve Program (longterm) but has some sites in the CRP/Conservation Reserve Program and EQIP/Environmental Quality Incentive Program.

ANTIDEGRADATION POLICY (provides greater protection from point source pollution for high quality streams) varies by state but does not provide protection from stormwater impacts – policy includes opportunity for local involvement in a triennial re-evaluation of stream classifications.
Ohio Presentation (selected notes)
- The state cannot allow streams performing at or above their water quality standards to be further degraded from point sources unless the applicant justifies it, in which case the state contacts locals to inform them and provide opportunity to participate in considering whether to lower standards. (If state allows the standard to be lowered, then state has to document the economic benefit.)
- Antidegradation does nothing for stormwater control
- Antidegradation rule identifies Exceptional Waters – revaluated every 3 years to add or remove streams – a hierarchy of streams = additional benefits for these
Kentucky Presentation (selected notes)
- Tier 2/high-quality streams can be lowered, but not below designated uses.
- If not assessed, then stream is high-quality water for permitting purposes.
- Streams designated as OSRW (Outstanding State Resource Waters) cannot be degraded below that designated use.

COMPREHENSIVE WILDLIFE CONSERVATION STRATEGIES (STATE WILDLIFE ACTION PLANS) enable states to obtain grants for conserving priority conservation areas and to avoid costs for recovery of endangered species.

Consultation Comments
- Indiana must work with private landowners to conserve. Now is a unique opportunity to identify incentives for landowners to use the plan because funding is available from various sources / unique opportunity to identify initiatives for conservation. Good time for any incentives for private landowners to learn what to do to help conserve wildlife. Conservation easements may be more favorable now that in the past (e.g., flood prone areas).

Kentucky Presentation (selected notes)
- The plan is a roadmap for conserving wildlife, not just endangered and threatened species.
- “We want to keep more common species common” – want to avoid situations where species become endangered.
- Kentucky’s State Action Wildlife plan includes maps that identify conservation areas for groups of species (parts of northern Kentucky are in the state’s Amphibian Conservation Area, Forestland Bird Conservation Area, Wetland Bird Conservation Area, and Mussel Conservation Area).
- Monies attached to the plan: state wildlife grants to work on action plan items.

Indiana Presentation (selected notes)
- “Keep common species common.” Once species are listed, it’s very costly. Want to keep species off the list.
- Action plan is tied to state’s wildlife money. NRCS Farm bill programs use wildlife plan to help focus their funding.

DESIGNATED USE CATEGORIES (defined in state water quality standards and assigned to individual streams as part of state strategy for meeting clean water goals) vary by state but include a process for periodic local comment on the uses assigned to individual streams. See the following section for comments on the KENTUCKY DESIGNATION FOR USE AS OUTSTANDING STATE RESOURCE WATER and INDIANA DESIGNATION AND PROTECTION AS “EXCEPTIONAL USE WATERS.

Consultation Comments
- When the state does watershed scale surveys, they review the designated uses and consider the need to recommend changes. This rule-making includes a comment process for the locals to weigh in with local knowledge and on options to upgrade or downgrade stream uses.

Kentucky Presentation (selected notes)
- In Kentucky’s triennial review, … procedure spells out what needs to be presented to make nomination [of Outstanding State Resource Water]

INTEGRATED REPORT UPDATES (occur every two years and include water quality conditions, stream attainment of water quality standards, listing of impaired waters, and schedule for developing TMDLs/Total Maximum Daily Loads) are or will soon be available for 2012 with
State Presentations (selected notes)
- Next summer OEPA will assess the East Fork of the Little Miami River.
- Ashley Fork of Woolper Creek is new Exceptional Water in Ky. 2012 IR (rm 0 to 3.7).

**MS-4 DESIGNATIONS** (result in development and implementation of programs to reduce discharges of untreated urban runoff from municipal stormwater systems) **will increasingly help reduce degradation of local streams.**

Consultation Comments
- “Divert roadway runoff from direct entry into streams” ... is more do-able than some of the other needs – may be easier to do if regulated - may be part of KYTC MS-4 permit, in time.
- Public notice in April that KYTC will have its own MS4 stormwater permit and be responsible to meet the permit requirements, but not final.
- Dearborn County is to have MS4 designation at some time (Lawrenceburg not in yet).

**NATURAL HERITAGE DATABASE** (part of an international data network) is maintained by each state to track “elements of biological diversity” across state and national boundaries and to identify potential conservation targets. See the following section for comments on the INDIANA NATURAL HERITAGE DATABASE.

**STORMWATER CONSTRUCTION PERMITS** (administered through state stormwater NPDES permitting programs) are helping to protect streams.

Consultation Comments
- Kentucky stream buffers are in effect now for new construction or residential development – construction sites are to maintain a buffer, via the construction permit.

Ohio presentation
- Ohio construction stormwater permits ... require high quality streams to have more BMPs.

**TOTAL MAXIMUM DAILY LOADS/TMDLS** (define the pollutant loads that an individual stream can carry and still meet water quality standards) **are great starting points for bringing streams up to standards – the challenge is implementation.**

Consultation Comments
- There’s a public comment period for placement on the TMDL list.
- Getting ... TMDLs in place with recommendations for what needs to be done. ... TMDLs provide good recommendations, but the devil is in the details of implementation.
- People need to make connections between OEPA permits and TMDLs and what it would mean at the local level.

Kentucky Presentation (selected notes)
- TMDL definition = a pollution diet = load stream can carry and still meet standard

Indiana Presentation (selected notes)
- TMDL = assessment of this pollutant that stream can assimilate and still meet standards
- Implementation of TMDL thru voluntary measures unless point source (then use permit to control)
- How to fix a stream if it has nonpoint source impairments and point sources are in control? 319 grants to SWCDs; coordination as a tool; or TMDLs can be implemented by non-funded groups.
Appendix D-6
Consultation Comments on the Effectiveness of Ohio Environmental Protection Programs

OHIO BALANCED GROWTH PROGRAM could be more effective if incentives were greater.
Consultation Comments
- Balanced growth is a strategy being used in Clermont County. Incentives offered at state level are pretty weak. If incentives were strengthened, the program could really take off. Most incentives are bonus points and technical support. / Balanced growth plan is incentivize-based – it’s up to municipalities to adopt. State incentives could be improved.
- Balanced growth encourages compact growth. Conservation design (in balanced growth incentives) will enable more choices for future property owners.

OHIO BIG DARBY WATERSHED PLAN can be used as a model for local conservation planning. http://www.bigdarbyaccord.com/updates/DarbyE1.cfm
Consultation Comments
- Could use Darby Creek in Ohio as model – it’s getting community support.
- Can take special stormwater permit overlay … such as done for Darby permit (Olentangee permit is more watered down. Darby permit is very aggressive.) / EPA special stormater permit, ie., Darby Creek counties – not a model due to specifics of that drainage area.

Ohio Presentation (selected notes)
- Big Darby Accord is a watershed land use plan that aims to protect biologic diversity and areas with sensitive resources and to limit impervious surface to 10%. It is the best plan to address river conservation

OHIO CLEAN OHIO FUND has been extremely important for local conservation and needs to be continued.
Consultation Comments
- Clean Ohio Fund has been critical to implementing local projects. Continued funding is needed.

OHIO ENTERPRISE FUNDS would be more effective for stormwater projects if spending were restricted to this purpose, as required.
Consultation Comments
- Enterprise funds [requirements] say stormwater funds should be spent on stormwater projects, but they are not.

OHIO’s ERIN (Earth Resources Information Network) provides tools to “facilitate inclusion of Ohio’s soil, water and natural resource data into private and public land use decisions.”
Consultation Comments
- ODNR website for ERIN (taking natural resources into ARC system as backbone)
OHIO FOREST TAX LAW helps maintain forested area.  
http://www.dnr.state.oh.us/tabid/5287/Default.aspx  
Consultation Comments  
- Ohio Forest tax law = tax reduction for those who maintain forest – state is working on streamlining it.

OHIO PRIMARY HEADWATER HABITAT INITIATIVE promotes protection of an important habitat and resource.  
Consultation Comments  
- Need to make communities aware of the beneficial aspects of corridor preservation -- especially cold water headwater streams (will be increased in importance soon). Primary headwater streams need protection – state website is to be more accessible

OHIO SMALL GOVERNMENT FUND is a good local funding source that could ideally be expanded to include “green” public works projects.  
Consultation Comments – A comment on Ohio Public Works Commission projects may apply more specifically to the OPWC Small Government Fund, which is used for water and wastewater projects. The OPWC also administers the Green Space Conservation Program that is funded by the Clean Ohio Fund.  
- Ohio Public Works Commission projects [see note above] should be expanded to include green public works type projects. This is a good local funding source that could be expanded to include more types of projects. Ohio Public Works Program is locally backed and better addresses local strategies - could include green infrastructure.

OHIO’S STATE SCENIC RIVER DESIGNATION provides limited but important protection to the Little Miami River.  
Ohio Presentation (selected notes)  
- Protection through the state’s designation = approval of publicly funded projects within 1,000 foot corridor: bridge projects, roads parallel to the river, culvert replacements, water and sewer lines, park and trail development, bank stabilization (Protection through the national designation = approval of water resource projects with potential impacts on the river bed or bank [triggered by request for a 404 permit to the Corps, such as for water and sewer line crossing or bridge])

OHIO SURFACE WATER IMPROVEMENT FUND (SWIF) GRANTS (319 grant program) can be used for green infrastructure and resource restoration, but the application process requires considerable staff time.  
http://www.epa.state.oh.us/dsw/nps/swif.aspx  
Consultation Comments  
- Surface Water Improvement Grants – they’re mostly for protection but provide for some restoration.  
- But for these grants, need staff to apply, report, and maintain, in addition to implement. Have to be accountable. Extra staff is needed just to work on applying for the money.

WATER TRAILS PROGRAM works to increase recreational use of water resources, which in turn increases support for conservation.  
Consultation Comments  
- ODNR has a Water Trails program. If get people on the water, get conservationists.
- Value of local surface water = people don't realize they can get on the water for private recreational opportunity, which would help awareness to protect resources. Shocked at how few people consider local streams for recreation. A change in this attitude can create interest in conservation efforts
- Need to enhance access to public areas. It's legal to float, but how to get on/access? Kayaks and canoes have increased sales lately.

**OHIO WATER RESOURCE RESTORATION SPONSOR PROGRAM (WRRSP) has been used to conserve local riparian forest.**

**Consultation Comments**
- Worked with the WRSP program to preserve area along the Little Miami River Corridor in Clermont County

**OHIO WATERSHED ACTION PLANS have produced good recommendations, but the challenge is implementation.**


**Consultation Comments**
- Ohio is getting watershed action plans in place -- or TMDLs with recommendations for what needs to be done. Watershed action plans and TMDLs provide good recommendations, but the devil is in the details of implementation.
- Watershed action plans (WAPs) are the most feasible by taking all of the listed strategies into account. WAP data is extensive and helps point out the most feasible strategies.
Appendix D-7
Consultation Comments on the Effectiveness of Kentucky Environmental Protection Programs

**KENTUCKY 319 GRANT PROGRAM** (used to implement the state’s Nonpoint Source Pollution Control Program through grants for watershed-based plan development and implementation, protection of Special Use Waters with identified threats, and other projects to help mitigate or prevent runoff pollution) **helps conserve land and protect resources.**

[http://water.ky.gov/Funding/Pages/NonpointSource.aspx](http://water.ky.gov/Funding/Pages/NonpointSource.aspx) See below for comments on KENTUCKY WATERSHED PLANS.

Consultation Comments
- Money from grants like 319 to purchase for conservation is great. Have one project with the plat laid out and now looking at conserving it. Funding allows for it (not economical to develop), so developer wants to conserve it. / Need funding sources to enable conservation and protection of resources
- State 319 funds can preserve valuable land

**KENTUCKY DESIGNATED USE AS OUTSTANDING STATE RESOURCE WATER increases the potential to protect these water resources.**

Kentucky Presentation (selected notes)
- All Kentucky Exceptional Waters and Reference Reach waters became Outstanding State Resource Waters in 2007 [for their designated aquatic life use], which is significant because the state could offer protection under OSRW [designated use] that it could not have offered under antidegradation policy.
- OSRW designated use: cannot be degraded below designated use
- OSRW designation is driven by biological integrity and rare species – automatic inclusion based on survey – happens often with 404 permit surveys, as along the Oho River
- “Permissible consideration” for OSRW in tri-annual review = anyone can nominate a stream for this classification. Procedures spell out what needs to be presented in order to make the nomination.
- Outstanding State Resource Waters: KYTC is very aware of these streams now. They take special construction processes if needed, such as bridge span.

**KENTUCKY HERITAGE LAND TRUST could be used to conserve more land in Northern Kentucky.** [http://heritageland.ky.gov/Pages/default.aspx](http://heritageland.ky.gov/Pages/default.aspx)

Consultation Comments
- Kentucky program Heritage Land Trust uses license plate money to fund protection from construction/to preserve valuable land.
- Boone County park district has three such tracts [purchased with Kentucky Heritage land Trust funds]. A lot in this pool is not being used.
- (Two other Northern Kentucky sites have been preserved with funds from this source.)

**KENTUCKY WATERSHED PLANS can produce locally-based solutions.**

Consultation Comments
- Kentucky [DEP Division of Water] is funding three watershed plans in Northern Kentucky. Watershed planning is a great process for involving locals. Watershed planning is best done at the local level. Development is occurring, but locals understand the area best. This is planning that produces realistic solutions
Appendix D-8
Consultation Comments on the Effectiveness of Indiana Environmental Protection Programs

**INDIANA 319 GRANT PROGRAM** (funds projects that reduce nonpoint source water pollution, including the development and implementation of TMDLs and watershed management plans) has benefitted Dearborn County.
http://www.in.gov/idem/nps/2524.htm
Consultation Comments
- Very structured grants program, a lot of strings attached
- One option for fixing a stream if it has nonpoint source impairments and point sources are in control
- 319 grants to Dearborn County have focused conservation efforts; the county has pursued additional grants

**INDIANA 401 CERTIFICATION PROGRAM** needs more information on good mitigation sites so that conservation can better target high-quality streams and wetlands.
Indiana Presentation (selected notes)
- Permit is to 1) avoid impacts to water resources 2) if can’t avoid, then reduce 3) mitigation=last option - but a lot of folks start with mitigation
- Need for information on locations of good mitigation sites – if agency knows what needs to be protected, then it can direct mitigation to that site – goal is for mitigation to be more strategic
- SWCD reviews the plans and the state enforces – construction on any land area of one acre or more begins with an SWCD permit – to get permit, need an SWCD-approved plan
- State depends on locals to do reviews

**INDIANA BICENTENNIAL NATURE TRUST** offers potential to conserve area in Dearborn County.
http://www.in.gov/dnr/heritage/7309.htm
Consultation Comments
- Potential to distribute $40 million in 2015 for local conservation for land trust conservation projects (requires a local match)
- The goal is for money to go to every county
- [This is an opportunity for Oak Heritage Trust to conserve area in Dearborn County.]

**INDIANA CLASSIFIED FOREST PROGRAM** is effective for conserving forest and can generate income for landowners that want to maintain their land longterm.
Consultation Comments
- The Indiana Classified Forest program has had some success. Most people participate in the program for tax reasons, but people can make money from forest as a crop, same as corn. Forested area can be managed to make money
- On a farm, Classified Forest Land is economically feasible. Dearborn County has a lot of acreage in Classified Forest Land.
- Classified Forest – if remove property, pay 10 years of back taxes of the difference in assessment between when the property was enrolled and now – never recommend Classified Forest or wetland reserve program if think owner will sell in the future = it’s a longterm program that runs with the land (and land is not to be altered)
INDIANA DESIGNATED USE AS “EXCEPTIONAL USE WATERS” does not apply to the Whitewater River – that designation may be warranted but would require local initiative to advocate for its consideration in the state’s rule-making process.

Consultation Comments
- “Exceptional Use Waters” is a designated use in Indiana water quality standards (with regulatory potential). IDEM does not assess these streams. There are no additional candidates being considered (none since the 1980s).
- To be designated as an Exceptional Use Waters, a stream would need to have a local champion. The designation would have to go through/would require the rule-making process at IDEM (drawn out process). IDEM would not pursue the designation of “Exceptional Use Water” unless there was a compelling reason.
- In Indiana, there is no assessment methodology to determine if waters are Exceptional Use.

INDIANA EXTERNAL DATA FRAMEWORK administrators are soliciting water quality data from local sources. [http://www.in.gov/idem/nps/2913.htm](http://www.in.gov/idem/nps/2913.htm)

Consultation Comments
- IDEM/Indiana Dept. of Environmental Management is looking for additional monitoring data.
- IDEM External Data Framework needs good information as a collaborative effort (instead of all state monitoring) – some for 319 – link to stormwater permit interest – want to get waters off 309d list – want technical assistance as part of external monitoring program

INDIANA FLOODPLAIN PERMITS authorize projects and cut-and-fill practices that result in floodplain fill and contribute to downstream flooding.

Consultation Comments
- Dearborn County has a lot of floodways and floodplains that have been filled. Development is occurring that involves cutting down hills and filling in valleys – it’s prevalent along the Ohio River and other streams (example of fill in Tanners Creek floodway). Development occurs in the floodplain but it’s not a floodplain. There’s been more flooding downstream because of more filled-in areas. IDNR Division of Water issues the permits to allow these practices, and the Corps (IDEM, IDNR, and Corps).
- County permits are insignificant compared to the state. Dearborn County staff have been surprised by permits issued; local officials have informed the state that it’s a problem.
- Dearborn County staff have called the state about flooding problems in Hardintown. State and local agencies are not using the same information for issuing permits (local using 1981-82 flood maps, vs. state using 2005 “best data”).
- Even if different information is used as a basis for permits, state and local agencies have different concerns about filling in the floodplains. Fill is taken from one side of U.S. 50 and placed on the other side, and the Corps reports that the area is not floodplain. Fill has been placed up to the edge of Wilson Creek (up to 2/3 feet to the edge). The numbers (elevation data) don’t match.
- For example, permits to fill were issued in Indianapolis for which the state reported there would be no downstream effect – but the state did not account for filled areas having a cumulative effect.

INDIANA DEPT. OF NATURAL RESOURCES GRANTS could support efforts to conserve high quality areas or resources if eligibility criteria were modified.

Consultation Comments
- IDNR grants are recreation-based and would not apply to conservation = most are for trails.
- Grants could be made applicable for conservation if paired [with information on rare or valuable resources].
INDIANA HERITAGE TRUST (IHT) is a potential funding source for conserving areas that protect rare species in Dearborn County.

Consultation Comments
- Makes state money available for conservation (from the sale of license plates)
- Makes funds available to local land trusts – Oak Heritage Trust is eligible in Dearborn County
- Gives higher scores areas with rare species.

INDIANA MITIGATION MATCHMAKER can be used by Indiana landowners to list sites or by project sponsors to find sites for mitigation projects. [http://idemmaps.idem.in.gov/apps/MitigationVolunteer/](http://idemmaps.idem.in.gov/apps/MitigationVolunteer/)

Consultation Comments
- Mitigation Matchmaker is on IDEM website as clearinghouse of potential sites for mitigation projects.
  Land owners can post opportunities to use land for mitigation projects, such as riparian areas to conserve, or habitat for restoration, or marginal farmland on stream bottoms. Arrangements are between landowners and developers. For DOT, projects need to be in the same HUC 8-digit watersheds.
  It’s a self-serve website with addresses for “where can I go for mitigation sites?”
- Transportation Department has contacted IDEM for potential sites for streambank stabilization but some of restrictions were a deterrent – major deterrent to landowner’s making land available for mitigation is requirement that easement be in perpetuity

INDIANA NATURAL HERITAGE DATABASE is used to direct conservation funds to the best sites but may not fully account for Dearborn County conservation needs and opportunities.

Consultation Comments
- IDNP conducts county surveys for natural areas to look for undisturbed areas, but has not spent much time in this county looking for rare plants -- likely to be more prevalent than reported

Indiana Presentation (selected notes)
- Used to direct conservation funds to best sites
- Data used for environmental review process
- Species identification in Dearborn County has been very limited / not much invested in surveys

INDIANA OUTSTANDING RIVERS LIST does not protect water resources through regulation.

Consultation Comments
- Outstanding Rivers List has no regulatory context (managed by Division of Water).
- If don’t have local political will, probably will not get OSRW or other designation - without local interest, nothing is going to happen.
Appendix D-9
Consultation Comments on the Effectiveness of Local Environmental Protection Strategies

PLANNING AND REGULATORY FRAMEWORK FOR LOCAL STRATEGIES

PLANNING is key for protecting resources before impacts occur that will cost money later. Consultation Comments
- If can plan instead of address problems after the fact – that’s a good thing.
- If planning were done up front, the listed concerns would be reduced.
- Always: protect what’s good instead of becoming something to be restored / protect what is good before needing to fix it.
- Now the concerns arise at the end when environmentalists fight the developers. We need to map out the sensitive areas to avoid poorly designed, leap frog development. We never have that discussion in advance. Most resolution occurs at the time of permit issuance.
- Local communities don’t plan. In today’s economy, they accept almost any development proposal. It’s hard to overcome the resistance to land use controls after a development project proposal has been submitted.
- Once development is proposed, plans are already in place and it may be too late for conservation. If conservation is goal, need to get information to the land owner before prepares a development proposal / before come to the office for re-zoning.

ZONING is not typically used to conserve environmental resources and may be constrained by state statute (e.g., Ohio), but it can be used to expand conservation design and green infrastructure, and it may have the potential to protect high quality areas as open space. Consultation Comments
- The county development code as currently written is not a tool for conserving high quality resources.
- Environmental qualities and impacts can be taken into account in planning (comprehensive plans) but not in zoning. ... Ohio planning law is so poor that can’t use zoning or subdivision regulations to [effectively reduce environmental impacts]....
- Don’t have code that requires easements or conservation area for sensitive areas. Current codes do not require conservation.
- Conservation practices are not always allowed by local zoning codes. Local codes are currently a barrier to projects with conservation practices.
- Ecological data could potentially be used to protect resources if code were re-written so that property would not be re-zoned if it caused harm to rare species
- For targeting conservation practices? It’s important to know which streams have the highest quality, because zoning codes are applied uniformly (per state requirement), but might look at [resources] differently if knew where there is high quality. ... It would be useful to know which local streams have higher quality.
- To divert roadway runoff from direct entry into streams ... could be done through local zoning regulations/is an engineering [procedure] that could be done through zoning.
- How can zoning be applied to preserve water quality? How is that enforceable per current law? Develop information on the legal basis to apply zoning for conservation and for [protecting] stream quality.
- May be possible for an open space requirement in the zoning code to target areas most important to conserve. Maybe Butler County’s zoning code could do better at recognizing natural resources that are valuable to preserve. Requirements for stream buffers do this, but they are based on pre-set distances rather than stream water quality.
- Ecological data could not be used much for zoning, but it could be used more for subdivision regulations and stormwater regulations -- not to prohibit, but to mitigate.

**STORMWATER REGULATIONS** are expanding opportunities to manage runoff in ways that reduce adverse and costly environmental impacts.

**Consultation Comments**
- Fortunately, U.S. EPA recently issued a policy framework for integrated stormwater and wastewater management. The Clean Water Act has the flexibility to allow communities to develop integrated watershed management plans that address stormwater and wastewater priorities based on water quality and public health.
- Sampling [by MSD] is underway in the Mill Creek and Little Miami River to help MSD make good decisions about its projects. This database can also be used by transportation projects. It clarifies between point source and nonpoint source pollution.
- A more standard set of regulations for stormwater and erosion control among counties, municipalities. A stormwater permit for special areas ... a standard set of guidelines for stormwater guidance.
- SD1 is doing watershed-based work.
- County to have MS4 designation at some time (Lawrenceburg not in yet).

**LOCAL ENVIRONMENTAL PROTECTION STRATEGIES AND THEIR EFFECTIVENESS**

**BALANCED GROWTH PLAN** Clermont County’s balanced growth plan for the Middle East Fork watershed may provide a model for other parts of the region.

**Consultation Comments related to the above strategy**
- Balanced growth is a strategy being used in Clermont County.
- Balanced growth encourages compact growth. Conservation design (in balanced growth incentives) will enable more choices for future property owners.

**CONSERVATION DESIGN** (includes the use of green infrastructure in new residential development projects) Conservation Design could help reduce the growth of impervious surface and protect aquatic resources in developing areas.

**Consultation Comments related to the above strategy**
- Trying to encourage the conservation design option to decrease impervious surface and preserve natural systems – provisions for maximum density to constrain impervious surface (but does not have maximum parking). Conservation design options would have incentives built in, e.g., would tie subdivision regulations to density.
- Conservation design ... will enable more choices for future property owners.

**CONSTRAINTS ON IMPERVIOUS SURFACE** Constraints on impervious surface, which would greatly benefit environmental resources, can be advanced by development regulations or incentives that limit parking lot or other impervious surface size.

**Consultation Comments related to the above strategy**
- Impervious surface is the most important of the concerns to address.
- EPA modeling shows that less than 10% impervious may have impacts -- that 5-6% imperviousness is the tipping point for impact/interrupts hydrology. 10% impervious is accepted as the turning point in the literature, but locally is 5-6%.
- County parking regulations don’t have maximums, nor maximums for amount of impervious surface
- Constrain the growth of impervious surface – it helps address needs to conserve stream corridors and protect streams not yet degraded
- Constraining impervious surface is not happening – Planning & Zoning is limiting impervious surface to a degree, but not doing all we possibly can
- [Need to] Restrict development of roadways (increasing of width)
- We continue to add roads, which increases impervious surface and new development. Need to look at conserving stream corridors and establishing riparian buffers and making improvements along existing roadways.
- Constraining the growth of impervious surfaces is the most encompassing [of the major environmental concerns or goals] /addresses all the others.
- Impervious surface increase is beginning of degradation

CURB-AND-GUTTER ALTERNATIVES (the use of green infrastructure for managing roadway runoff)  
Curb-and-gutter alternatives would be used more often if local regulations were revised.
Consultation Comments related to the above strategy
- A lot of subdivision regulations require curb and gutter, and now we want to get that requirement out of the regulations! / Doing a flip-flop on curb and gutter regulations – was good and now is bad. Is wrinkle with education efforts.
- Local building codes often require curb and gutter, so projects need a variance, which is a barrier. If curb-and-gutter alternatives were allowed, this would help.
- Codes also restrict the use of no-curb and narrow roads.
- Divert roadway runoff from direct entry into streams is feasible / is most feasible
- Divert roadway runoff from direct entry into streams as low-hanging fruit – more do-able – may be easier to do if regulated - may be part of KYTC MS-4 permit, in time.

DETENTION BASIN  
Design requirements for detention basins need to be modified so that released flows are more similar to a natural flow regime.
Consultation Comments related to the above strategy
- Need to modify requirements for detention basins. Detention basins are designed to not reach peak flow. But extended flow/no returns to normal flow – need to better match the natural flow regime / stormwater basins control flooding, but extending intervals of flow which create other problems
- Example of a site constrained so that can’t do appropriate detention basin, but could do permeable pavement. At the end, show that flow is not increased.

DONATIONS OF LAND  
Land donation as a project prerequisite could help maintain areas with conservation value if the donation requirement were designed for that purpose (as opposed to a general requirement).
Consultation Comments related to the above strategy
- Require a percent of land for conserved areas -- developer goes to least desirable areas. Where I live, new developments are required to donate conservation land
EASEMENTS  Easements could be highly effective for conservation and used more often if incentives were increased to cover more of the landowner cost.

Consultation Comments related to the above strategy
- Some interest in easements [as one of the best strategies for protecting environmental resources].
- Conservation easements have a lot of potential, in both urban and rural areas. In rural areas, easements from farmers can provide large tracts alongside streams. Then when the area is developed, still have the easement. Need for easements to focus on corridors. The problem is holding the easement, and that the farmer wants more money (which makes him more willing to establish the easement). / Agricultural easements are easy to get along stream corridors and this protects against future land uses. This is the easiest way to gain large amounts of land.
- (Tax incentives are not enough to incentivize a landowner to create an easement as a strategy for protecting forested area.)
- County Planning] often approaches developers in Warren County about conservation easements along with PUD applications.
- Not enough incentives to get conservation easements put in place – even for landowners who would like to do it. A fee simple purchase is often cheaper than the legal costs for a conservation easement.
- Require a percent of land for conserved areas -- developer goes to least desirable areas. Where I live, new developments are required to donate conservation land
- A lot of interest in conservation easements from people who are frustrated with farming – without local interest [in conserving local resource areas], nothing is going to happen
- Incentives help.

GREEN INFRASTRUCTURE  Green infrastructure can be used to avoid project impacts on environmental resources and thus reduce cumulative impacts and their cost. (See Chapter 2 on Major Environmental Concerns for comments on green infrastructure’s feasibility.)

Consultation Comments related to the above strategy
- Stormwater drainage ways can be sent through rain gardens or wetlands before entering a river.
- Natural stormwater treatment is the best way. (We are challenged by urbanization.) Transportation projects need up-front guidance for stormwater infiltration designs and practices.
- Don’t allow pipes to discharge directly to streams -- allow stormwater to get to the stream but not directly. Figure out a way to provide for retention of roadway runoff so that pollutants are filtered.
- Vegetative swales (but the drawback to swales is that they take land).
- A lot of stormwater management opportunities are in the right-of-way. What can be done with right-of-way for runoff to slow down and soak in? [OKI could] work with transportation engineers to better manage runoff.
- Water needs to collect into containment system rather than going direct into stream or reservoir.
- Controlling the growth of impervious surface – new technologies make it increasingly feasible, e.g. raingardens, increased pervious surfaces, and implementation of BMPs.
- Manage roadway runoff with BMPs (best management practices) and avoid direct discharges to streams.

MITIGATION OF IMPERVIOUS SURFACE  (as part of stormwater regulations) Requirements to mitigate impervious surface might be a more effective tool for reducing environmental impacts than restrictions on the growth of impervious surface.

Consultation Comments related to the above strategy
- Impervious surface is the most important of the concerns to address -- but [suggest] to mitigate the impact of impervious surface rather than constrain the growth
- Mitigate the impacts of impervious surface – a different version of “constrain the growth of impervious surface”
- If the developer had to pay the cost of what’s destroyed, would it make a difference? If there were education on how much it would cost to mitigate? [It costs more money to mitigate than to avoid.] / Can the real costs of development be assessed? / What if developers were required to pay for costs of impacts or cost to mitigate impacts
- Consider the cost per linear foot to do restoration. It costs a lot of money. / Need to identify costs for conserving vs. mitigation. NKU Center for Applied Ecology would know stream restoration costs per linear foot.
- Avoid impacts instead of mitigate for them and then compare the costs - Look at the long term costs

PARKS The ability of parks to protect environmental resources depends partly on the availability of funds for park maintenance and acquisition.
Consultation Comments related to the above strategy
- Parks funding is constrained -- a lot of operation and maintenance is tight -- can’t take on additional resources to maintain parkland
- Dysfunctional parts of development projects have been given to the park district, which does not have enough money to do what’s needed for the park system. Greenspace is the goal, but county parks include four pieces that the District can’t access. / Greenspace shouldn’t just be the leftover spaces. County parks have places that it can’t access to maintain.
- Hard to add more parks [because of resources needed to maintain them]. Fish licenses dropping, and budgets. More parkland with less money.

PUBLIC PROJECTS Public projects may provide opportunity to conserve or protect environmental resources through their design.
Consultation Comments related to the above strategy
- Opportunities to tack on recreation opportunities to development projects. For example, there may be opportunity to / include a boat ramp in conjunction with bridge construction.

REDUCED MOWING ON PUBLIC LANDS (e.g., highway rights-of-way, parks, public properties)
Reduced mowing can expand wildlife habitat and reduce maintenance costs.
Consultation Comments related to the above strategy
- Took 60 acres out of the mowing cycle and into natural habitat – it saved money – put in cost-efficiency. Environmental protective measures are the most cost protective. Management of public lands vs. private lands. / Cost savings is selling point for not mowing. / Cost of maintenance reduction is a selling point for conservation practices.

SOILS PROTECTION through practices that retain topsoil and soil structure (and reduce compaction and disturbance) Soils protection results in increased infiltration, reduced stormwater runoff, better tree retention, and lower property maintenance costs.
Consultation Comments related to the above strategy
- Importance of soils for all – they relate to development – “prime soils” are an issue – “It’s all about the dirt” – Nutrients and storm water are not assimilated in disturbed soils. Soils have a huge effect on water quality. The quality of soils affects its ability to filter water.
- I receive a lot of calls about trees dying. Trees are not surviving past 15 years in areas where soils were scraped off. After about 15 years, trees move from juvenile to mature – the root system changes (trees are not just above the ground but are also below the ground). Importance of removing macro pores,
competition for nutrients, planting in subsoils – under these conditions, trees will not grow more than 15 years. If you remove topsoil, it does not come back. But just leaving the topsoil doesn’t work – need to leave the topsoil alone. Poor soil conditions prevent trees from growing large because of competition and nutrient issues. Leave soil alone during development.

- Fertilizers are used to bring the topsoil back and rejuvenate the soil, which results in more runoff. Development practice of removing topsoils increases the need for yard maintenance, costs, and runoff issues.

**STORMWATER PERMIT OVERLAY**

An example of a stormwater permit overlay is included in the Big Darby watershed plan.

**Consultation Comments related to the above strategy**

- If take a regulatory approach, can take special stormwater permit overlay for the Little Miami or other areas. Such as done for Darby permit

**STREAM BUFFERS (Riparian Buffers)**

Stream buffers are being used more widely but are generally not designed to their optimum ability to avoid impact costs and protect resources.

**Consultation Comments related to the above strategy**

- Stream buffer is probably the single best management practice that could be put on the ground/best environmental protection strategy is stream setbacks.
- Stream ordinances have a lot of promise because there are so many benefits to protecting stream corridors. It’s the most important way of protecting habitat.
- Stream buffers have been great for Butler County, but still have some issues (cover the whole county – second order streams and larger).
- Need to make communities aware of the beneficial aspects of corridor preservation -- especially cold water headwater streams.
- Riparian corridor ordinance discussions in Dearborn County (generally along stream corridors) would address most of the bullets.
- When looked into establishing ordinances for riparian corridors a few years ago, the issue was how to define the corridor. Could revisit this.
- Conserve stream corridors is the one most effective. It not only provides buffer for stream but is integral to stream habitat, and mitigates pollutants. Riparian buffer zones as valuable. Gets into people’s perception. But, it goes against the preference for a “manicured look,” and against people who fear snakes (natural vegetation provides habitat for snakes, which raises public outcry).
- Hamilton Co. has stream buffer regulations, but they’re not strict.
- Warren County’s zoning code rewrite has stream setback regulation, but they had to be watered down to voluntary because of pushback, even from building departments.
- Difficult to make stream buffers a priority for local agencies – beyond being in subdivision regulations – needs to be an item of public education.
- Taking a “bath” in regulations. Stream setbacks is an example – not enough staff to regulate.
- Can’t keep up the buffer at Mills Parks. Have signs to try to educate the public, but it’s difficult.
- Conserve stream corridors is important for hunting and fishing.
- New stormwater regulations have requirement for 25’ or 50’ buffer on stream, depending on quality of stream. Is that wide enough [for habitat protection]/does it help?
- [Comment on preceding comment]: It’s a start.
- Stream buffers are in effect now for new construction or residential development – construction is to maintain a buffer, via construction permit.
- Proper buffer should have trees and shrubs and not just lawn
- Need for easements to focus on corridors.
- The state can only recommend measures like buffer zoning to local governments. ODNR’s advocacy of buffer zoning was rejected by a board of township trustees who - were responding to citizens saying no.
- Zoning is for enabling public safety health and welfare -- some argue that setbacks won’t hold up as enabling legislation. Warren Co. SWCD has identified blueline streams and recommended 50'/75'/100'/300' setbacks for development. SWCD would review on a site-by-site basis. There’s a disconnect between big picture water quality and how local regulations and stream buffers will have an impact.
- Want to revisit riparian corridor ordinances and some level of interest for support (setback, easement), but not at the top of the list for now.
- What are the best (most effective) strategies for addressing these concerns? Stream buffers are a good place to start.

**TRANSFER OF DEVELOPMENT RIGHTS (TDR)**

TDR can conserve high-value resources by shifting development to designated growth areas, but that would require state legislation in Ohio and Indiana.

Consultation Comments related to the above strategy
- A transfer of development rights (TDR) is the best way to address/defuse the controversy over the takings issue. Then the owner is compensated for the loss of potential real estate value.

**TRANSPORTATION PLANNING AND PROJECT DESIGN**

Local transportation planning and project design can reduce costs related to environmental impacts.

Suggestions (More comments and suggestions are provided for Project-level Impacts on Environmental Resources in Chapter 2 and Suggestions for Transportation Policies and Practices in Chapter 4.)
- Account more fully for the financial value of environmental resources
- Increase the use of clear-span bridges
- Manage roadway runoff with BMPs (best management practices) and avoid direct discharges to streams.
- Optimize public investments by using transportation improvements to advance sustainable development and protect or restore environmental resources.
- Reduce the use of culverts.
- Most of roads are along streams, so can’t change that. But for new roads, don’t have stream crossings.... Need to look at conserving stream corridors

**TREE PLANTING AND RETENTION**

Trees can effectively reduce stormwater runoff and flooding.

Consultation Comments related to the above strategy
- Trees have a large impact on storm loads.
- We don’t have a way to assign a monetary number to an urban forest, which cuts stormwater management costs.
- Trees have a large impact on storm loads.
- Clarify the connection between reducing forest cover in watersheds and downstream flooding
Appendix D-10
Consultation Comments on
Impediments to More Effective Environmental Protection

The consequences of conventional development practices are not well understood.
Consultation Comments related to the above impediment
- Need for people in communities to understand implications of development practices.
- [Consider] the cost per linear foot to do restoration. It costs a lot of money. / Need to identify costs for
conserving vs. mitigation.
- Clarify the connection between reducing forest cover in watersheds and downstream flooding –
importance of educational tools.
- Restoration is not an easy answer: The cost of repairing damaged ecosystems is high and restoration
has a low success rate. presentation note
- People need to make connections between OEPA permits and TMDLs and what it would mean at the
local level.
- Politicians want to preserve the rural character but will not support any regulation.
- If the developer had to pay the cost of what’s destroyed, would it make a difference? If there were
education on how much it would cost to mitigate? [It costs more money to mitigate than to avoid.] / Can
the real costs of development be assessed? / What if developers were required to pay for costs of
impacts or cost to mitigate impacts
- Problem with the attitude “ask forgiveness instead of ask permission” is that once the resource is
damaged, you can’t fix it.
- Helping people realize that you can pay some now or pay more later may change the conversation.

The benefits of avoiding environmental impacts are not well understood.
Consultation Comments related to the above limitation
- Resource conservation/avoidance strategies can’t happen without education of public officials and the
public.
- There’s a disconnect between big picture water quality and how local regulations and stream buffers will
have an impact.
- “Can’t get greenspace overnight. Once you lose it, can’t get it back.”
- Education is important, so that developers know why swales/practices are important.
- Need to make communities aware of the beneficial aspects of corridor preservation -- especially cold
water headwater streams (will be increased in importance soon). Primary headwater streams need
protection.
- Everyone needs to be informed and educated (builders, elected officials, residents). What are the long-
term costs? What would it mean to have TMDL? What is needed – and what is the cost of doing or not
doing?
- Riparian buffer zones as valuable. Gets into people’s perception. But, it goes against the preference for a
“manicured look,” and against people who fear snakes (natural vegetation provides habitat for snakes,
which raises public outcry)
- Needs to be a better understanding of economic costs of “protect the streams not yet degraded” – OKI
can help show economic benefits/costs and local examples to share. ... / Need better/more accurate
understanding of costs. OKI could help with cost -- with understanding and education.
- Importance of education - example of tree ordinance for Indianapolis to conserve forest in areas
generally difficult to farm, such as too steep or wetland, but business sees it as restrictive
- Many opponents do not know about what they oppose.
- Education is most important – No one knows what an endangered species is (except as something that gets in my way)
- Need education of economic costs and benefits – of both technical and legal
- People don’t understand. Did this with Boone County Park -- went from lawn to wild, and received calls against it. Went to improve the parks and public went wild.
- Change of mindset is needed. Progress, but...

**The financial values of environmental resources are not adequately accounted for.**

**Consultation Comments related to the above limitation**
- There’s a cost for not building in a sustainable way. We don’t have a way to assign a monetary number to an urban forest, which cuts stormwater management costs.
- Promote the ecological value of resources in place before eradicating them = best for the public but not the developer. Need to assess and connect the value of natural resources to development
- We need to equal out the scales so forested land is not always the path of least resistance for a transportation project
- We are not accustomed to recognizing environmental values.
- Fee structures should be revised to give environmental impact a stronger hand. User fees would help. Service fees from the user perspective would help improve planning. The current funding mechanism may still work in rural areas, but not in urban areas. The economy and environment are on parallel tracks, not perpendicular ones.
- Transportation projects dare not disrupt burial grounds, but environmental resources have not reached the same level of cultural value as religious or educational institutions.
- We must educate the politicians on the true value of environmental resources
- Cincinnati has a code to protect and value trees. But neither the state nor Duke Energy recognize that code.
- Helping people realize that you can pay some now or pay more later may change the conversation.
- We need guidelines similar to those for the Americans with Disabilities Act, such as a rule to set aside 10% of a project’s value for environmental practices.
- Sustained value of land if used for conservation
- We should value things differently.

**Public funding levels hinder the ability to protect and conserve environmental resources.**

**Consultation Comments related to the above limitation**
- There’s really not enough funding to preserve – conservation is going to depend on land use.
- Parks funding is constrained -- a lot of operation and maintenance is tight -- can’t take on additional resources to maintain parkland
- Not enough incentives to get conservation easements put in place – even for landowners who would like to do it. A fee simple purchase is often cheaper than the legal costs for a conservation easement.
- A lot of agencies are limited to make improvements because they are short on staff.
- Can’t maintain the stream buffer at Mills Parks.
- Taking a “bath” in regulations. Stream setbacks is an example – not enough staff to regulate.
- Will take more money for effective approach.
- Hard to add more parks [because of resources needed to maintain them]. Fish licenses dropping, and budgets. More parkland with less money.
- The willingness is there for more standards, but we still face an uphill battle because of funding.
- Park district does not have enough money to do what’s needed for park system.
- Need funding sources to enable conservation and protection of resources
State policies could better support efforts to protect environmental resources.

Consultation Comments related to the above limitation
- If the state made all of these [major environmental concerns] policies and gave money to implement them – if they made steam buffers mandatory -- it would make our lives easier / Mandate stream buffers / State policy could make local enforcement easier.
- For targeting conservation practices? It’s important to know which streams have the highest quality, because zoning codes are applied uniformly (per state requirement), but might look at [resources] differently if knew where there is high quality. It would be useful to know which local streams have higher quality.
- For developers to use BMPs (best management practices), they want to know what works before they accept them, and for that we need more research at the state level / Development is only about the money. Research is needed on BMP effectiveness on the state level.
- State development restrictions act as indirect local zoning.
- Current state administration wants streamlined approach to permitting, but wants economic and scientific documentation. Right now, regulations are up in the air – don’t know where to go next.
- “Exceptional Use Waters” is a designated use in Indiana state water quality standards (with regulatory potential). IDEM does not assess these streams. There are no additional candidates being considered (none since the 1980s). There is no assessment methodology to determine if waters are Exceptional Use. To be designated as an Exceptional Use Waters, a stream would need to have a local champion. The designation would have to go through/would require the rule-making process at IDEM (drawn out process). IDEM would not pursue the designation of “Exceptional Use Water” unless there was a compelling reason.
- Don’t politics carry the most weight for decisions on the locations and designs of development and transportation projects? For example, Ohio’s Governor’s recently announced development priorities showed little regard for environmental values.
- People that are driving the economy help fund legislator campaigns and talk to them / Legislators are listening to economic development folk
- The mining industry has a lot of leverage – as does ODOT. Now Ohio EPA has to justify rules and regulations with economic impacts and science to justify implied impacts. Although we know projects will have impacts, in many cases we don’t have scientific evidence to support the use of alternative methods.
- The state can only recommend measures like buffer zoning to local governments.
- The Indiana Outstanding Rivers List has no regulatory context.
- State policy – makes local enforcement easier
- Ohio planning law is so poor that can’t use zoning or subdivision regulations to [effectively reduce environmental impacts].
- Balanced growth plan is incentivize-based – it’s up to municipalities to adopt. State incentives could be improved.
- Trying to get ODOT to change standards

Local planning could be more effective for protecting environmental resources.

Consultation Comments related to the above limitation
- Local communities don’t plan. In today’s economy, they accept almost any development proposal. It’s hard to overcome the resistance to land use controls after a development project proposal has been submitted.
- If planning were done up front, the listed concerns would be reduced.
- Now the concerns arise at the end when environmentalists fight the developers. We need to map out the sensitive areas to avoid poorly designed, leap frog development. We never have that discussion in advance. Most resolution occurs at the time of permit issuance.
- If can plan instead of address problems after the fact – that’s a good thing.
- Once development is proposed, plans are already in place and it may be too late for conservation. If conservation is goal, need to get information to the land owner before prepares a development proposal / before come to the office for re-zoning. Planning will work on education but that’s not the main focus (minimal) of Planning & Zoning

**Incentives would be more effective if they were adequate.**

**Consultation Comments related to the above limitation**
- We need to make it easier for people to do the right thing.
- If incentives were strengthened, the program could really take off.
- [Existing] Tax incentives are not enough to incentivize a landowner to create an easement as strategy for protecting forested area
- Not enough incentives to get conservation easements put in place – even for landowners who would like to do it
- The problem is holding the easement, and that the farmer wants more money (which makes him more willing to establish the easement).
- Equitable incentives don’t solve problems.
- We need to incentivize a project to avoid environmental areas by awarding it points for doing so.
- The undesirable choice is easier to do. The desirable choice is harder
- Incentives help.

**Changes are needed to make existing regulations more effective.**

**Consultation Comments related to the above limitation**
- Regulations not effective/ changes needed to make regulations more effective ...
- Hamilton Co. has stream buffer regulations, but they’re not strict.
- Ohio planning law is so poor that can’t use zoning or subdivision regulations to [effectively reduce environmental impacts]....
- The County’s zoning code rewrite has stream setback regulations, but they had to be watered down to voluntary because of pushback, even from building departments.
- Maybe [County] zoning codes could do better at recognizing natural resources that are valuable to preserve. Butler County stream buffers do this, but they are based on pre-set distances rather than stream water quality.
- ... zoning codes are applied uniformly (per state requirement), but might look at [resources] differently if knew where there is high quality. ...
- Local building codes often require curb and gutter, so projects need a variance, which is a barrier. If curb-and-gutter alternatives were allowed, this would help. Conservation practices are not always allowed by local zoning codes. Local codes are currently a barrier to projects with conservation practices.
- Codes also restrict the use of no-curb and narrow roads. Fire Department is against it, because can’t turn around in cul de sacs. Sometimes safety codes get in the way. Need to find ways for conservation and safety codes to work with each other.
- Developers need design flexibility to do conservation development – like flexibility instead of a setback requirement...
- How can zoning be applied to preserve water quality? How is that enforceable per current law?
- A lot of subdivision regulations require curb and gutter, and now we want to get that requirement out of the regulations
- Need a re-evaluation of how we're doing things/need to re-evaluate standard techniques
- Don't have code in place that requires easements or conservation area for sensitive areas. Current codes do not require conservation.

**Change is difficult.**

**Consultation Comments related to the above limitation**

- Don't need new requirements, but different [participant A]. Different won’t work either. [participant B]
- Seen not just a different regulation, but seen as more regulation. Flexibility will be seen as more, although it’s not.
- Political climate is such that it’s not easy to do regulatory things
- The vocal few vs. supporters not as vocal.
- Environmental protection competes with other priorities/economic development, and it will lose. Anything that promotes economic development will trump environmental issues. Efforts to come up with new environmental regulations will be shot down.
- Regulatory approach is not [necessarily] the best option [for conserving area]. (Example of proactive conservation is use of higher scores to direct funding for protecting rare species.)
- Comes down to money. Economics trump science.
- Development is only about the money.
- Try to change the mindset. People have done things the same way for 30 years. They’re comfortable with the status quo.
DEMONSTRATION PROJECTS are an effective means of expanding awareness and improving understanding of how and why to do things differently.

Consultation Comments related to the above suggestion
- Try to change the mindset. People have done things the same way for 30 years. They’re comfortable with the status quo. The need is for education.
- Education is the big goal in all of this – and demonstrations to share information about what works and what has feasible costs. The most important thing is to educate via demonstrations.
- Best way for educating is hands-on-examples.
- Butler County has done a good job [of education] – has basin days, ..., rain gardens -- has raised awareness. The county has used schools and other institutions that are good places for demonstration projects.
- Need to show the public and officials works best and where these practices can be implemented.
- It’s good to have demonstration projects in high traffic areas, where they’re visible examples of improvements to the community. Butler County has demonstration projects in high-traffic areas, like Beckett Ridge, where people can see them. Took a traditional detention basin [and converted it to] a good model.
- Conservation development is exemplified at Milliken Road with the Butler County -- good example of a forested tract. Also send developers to Hidden Green on Darby for a good example.
- Need living examples
- Education is important, so that developers know why swales/practices are important.
- A lot of good examples naturally = with more pervious surface. Need education and outreach.
  Longterm is the value. Some developments have been in place a long time and are getting high prices. / Need examples of BMP development with good returns (with less maintenance and longterm costs)
- Need good example here of Silva cells (Cincinnati) and “recipe” (Silverton).
- Education is most important

PUBLIC EDUCATION needs to be more strategic and less general, which involves targeting education to specific audiences and clarifying the relevancy of environmental protection to people’s self-interest.

Consultation Comments related to the above suggestion
- Resource conservation/avoidance strategies can’t happen without education of public officials and the public. More than education, need passion. Figure out how to convey these concerns so that it’s relevant to people, such as downstream flooding – relevant to individuals’ lives and what happens in Dearborn County. Education to incentivize = effective messages connect to individuals’ lives.
- Explain how these issues are relevant to self-interest.... Who is the audience? What do they care about? Need to package the info. Involve groups that have experience with the issue to help create/deliver the message to the audience (flood victims, fishermen). “One size” does not fit all.
- Value for recreation as the driver for public interest in protection.
- Public opinion surveys -- ask what people care about – what they value and what they would support.
- Not all tenants care as much about their regional environment, so we need to educate real estate agents and brokers.
Environment is not a priority for a lot of people in Kenton County. It will take time and awareness efforts to get information out. Then think about stream buffer requirements. No support. / Difficult to make stream buffers a priority for local agencies – beyond being in subdivision regulations – needs to be an item of public education.

Too big of an issue for any one agency to address, state or local. Start with education. If ___can reach local elected officials. More information is better. / Education of legislators especially important / Education is key = reaching local officials directly

It’s all about your right to clean water, our right to clean air... / Make issues on a human level: it’s your clean water, it’s your clean air

Need a champion / Someone needs to champion – at every level.

Northern Kentucky needs an educated/knowledgeable citizen base not affiliated with any special group/particular agency. Need common voices so that when one takes against greenways, hear another voice / develop citizens-based group not affiliated with any local group to be informed on issues

**REVIEW AND REVISION OF LOCAL REGULATIONS** could remove obstacles and provide incentives for good development practices that would reduce environmental impacts.

**Consultation Comments related to the above suggestion**

- Local building codes often require curb and gutter, so projects need a variance, which is a barrier. If curb-and-gutter alternatives were allowed, this would help. Conservation practices are not always allowed by local zoning codes. Local codes are currently a barrier to projects with conservation practices.

- Identify the obstacles to people who want to be innovative but are stymied by regulations. Identify alternatives and examples for changes to zoning codes and subdivision regulations. Provide a guide for removing obstacles and providing incentive -- a "Development for Dummies."

- Developers want flexibility in how they can develop – flexibility to mitigate impacts. Moving toward flexibility in subdivision design. ... Developers need design flexibility to do conservation development – like flexibility instead of a setback requirement... / Allowing more design flexibility to developers to include BMPs and less impervious surface – flexibility in design and not regulations requiring it

- Don’t need new requirements, but different.

- Example [of needed changes to standard techniques] is need to modify detention basins.

- Want to revisit riparian corridor ordinances.

- A lot of subdivision regulations require curb and gutter, and now we want to get that requirement out of the regulations!

- New stormwater regulations have requirement for 25’ or 50’ buffer on stream, depending on quality of stream. Is that wide enough [for habitat protection]/does it help?

- Hamilton County has stream buffer regulations, but they’re not strict.

- Stream buffers have been great for Butler County, but still have some issues (cover the whole county – second order streams and larger).

- Codes restrict the use of no-curb and narrow roads. Fire Department is against it, because can’t turn around in cul de sacs. Sometimes safety codes get in the way. Need to find ways for conservation and safety codes to work with each other.

- Need a re-evaluation of how we’re doing things/need to re-evaluate standard techniques.

MORE STANDARDIZED REGULATIONS could reduce environmental impacts more effectively than individual jurisdiction efforts to strengthen regulations and incentives.

**Consultation Comments related to the above suggestion**

- [Need] Consistency of regulations across the region.
- Concern that developers will just go over to the next county/town. Regional approach to standardize regulations. To address local concerns about losing development, need regional approach for economic development (include legal precedent).
- A more standard set of regulations for stormwater and erosion control among counties, municipalities. A stormwater permit for special areas ... a standard set of guidelines for stormwater guidance.
- Pool jurisdictions/agencies to discuss development standards.
- Unless stormwater BMPs are required, there will be no mass scale expansion
- We should pick 10 priorities, such as improving water quality or preserving forested tracts. Each priority should then be assigned a list of best management practices to help satisfy it

**LOCAL INITIATIVE can influence state conservation efforts (and funding), such as by targeting or protecting local resources or providing information to state agencies.**

Consultation Comments related to the above suggestion
- Local initiative for conservation can drive state support and funding
- State conservation agency responds to interest in the environmental value of resources at a local level.
- If don’t have local political will, probably will not get Indiana Outstanding State Resource Waters or other designation - without local interest, nothing is going to happen
- To be designated as an Exceptional Use Waters, a stream would need to have a local champion.
- For Kentucky Outstanding State Resource Waters tri-annual review, anyone can nominate – procedure spells out what needs to be presented to make nomination
- Locals can influence designation of Outstanding State Resource Waters. Locals can influence the use of stream buffers by the state.
- Locals work with state programs already -- like MS4 permits. Need to re-tool – to work with states to make existing programs more effective.
- From state perspective, desire is for “focused” conservation areas – want to focus spatially on a place. Focus conservation on where development is not happening. Pick a target area for using these tools to conserve a place. Might use trails to conserve.
- Indiana state conservation agencies can help conserve areas by working with the local land trust, but otherwise need local interest.
- Views and political support greatly varies across the state -- local support is key.
- Local initiative is more important than state.

**IDENTIFICATION OF TARGET CONSERVATION AREAS can be used to optimize funding opportunities and conserve area before development occurs.**

Consultation Comments related to the above suggestion
- Regulatory approach is not the best option [for conserving area]. Use data on rare species/regionally significant streams/high-value resources as incentives. Approach could be: here's what we identified of ecological importance, and what kinds of programs might that information best inform? Example of proactive conservation are use of higher scores for funding of land trusts by Indiana Heritage Trust to direct conservation to areas that have/are in vicinity of rare species.
- For targeting conservation practices? It’s important to know which streams have the highest quality, because zoning codes are applied uniformly (per state requirement), but might look at [resources] differently if knew where there is high quality. It would be useful to know which local streams have higher quality.
- From state perspective [Indiana], desire is for “focused” conservation areas – want to focus spatially on a place. If Dearborn Co is interested in conservation and development, is there enough interest in conservation in this county, and where is that conservation interest going to happen? Focus
conservation on where development is not happening. Whitewater River has a lot of potential for conservation and development. Pick a target area for using these tools to conserve a place. Might use trails to conserve. Here’s where to [develop] and here’s where to target.
- Local initiative for conservation can drive state support and funding
- Areas with advantage for conservation are those without a lot of meaningful habitat (rare species), lack of sewers, slopes
- Identify potential conservation areas where development is not as likely to occur
- Once development is proposed, plans are already in place and it may be too late for conservation. If conservation is the goal, need to get information to the land owner before prepares a development proposal / before come to the office for re-zoning (and to get information to local jurisdictions for consideration in developing their comprehensive plans)
- Focus could be watersheds/areas in watersheds that have received grants/multi-grants = areas where work has been done
- Views and political support greatly varies across the state -- local support is key.
- IDNP can help conserve areas by working with local land trust, but otherwise need local interest
- Need information on locations of good mitigation sites – if [state agency] knows what needs to be protected, then it can direct mitigation to that site
- Focus mitigation efforts/projects

**ECOLOGICAL DATA could be used more effectively in local efforts to protect environmental quality.**

Consultation Comments related to the above suggestion
- [Ecological data could be used] Not so much [to influence] zoning, but [to influence] subdivision regulations and stormwater regulations. Not prohibit, but to mitigate.
- [State ecological data] be used if re-wrote the code so that would not re-zone property if it caused harm to rare species, but don’t have code in place that requires easements or conservation area for sensitive areas
- Environmental qualities and impacts can be taken into account in planning (comprehensive plans) but not in zoning.
- County zoning codes could do better at recognizing natural resources that are valuable to preserve
- It’s important to know which streams have the highest quality, because zoning codes are applied uniformly (per state requirement), but might look at [resources] differently if knew where there is high quality. ... It would be useful to know which local streams have higher quality.
Appendix D-12
Consultation Comments on Suggestions for Transportation Policies and Projects

Account for the financial value of environmental resources in transportation planning and project design.
Consultation Comments related to the above suggestion
- If we assigned monetary values to natural resources, we would retain more forested tracts. We should identify the costs and steps for mitigating the removal of forested tracts and other environmentally sensitive areas.
- We don't have a way to assign a monetary number to an urban forest, which cuts stormwater management costs.
- Avoid impacts instead of mitigate for them and then compare the costs - Look at the longterm costs.
- Some form of watershed or infrastructure plan conformance should be a requirement for transportation projects. We need to incentivize a project to avoid environmental areas by awarding it points for doing so.
- Can we revise state laws to place a higher monetary value on rare forested land in the city? (Real estate costs persuaded ODOT to choose Mt. Storm Park land over railroad property for highway right of way.)
- Natural undeveloped areas usually offer the path of least resistance to transportation projects. ODOT's intention to remove part of a forested hillside at Mt. Storm Park rather than adjust a railroad line's placement is a prime example of this. The decision was made within the past year for the planned widening of I-75. At the Mitchell Avenue exit along the Mill Creek, ODOT has already removed 5,000 trees that had been planted by Cincinnati Parks and project partners.
- We are not accustomed to recognizing environmental values.

Apply the same stormwater management standards to state transportation projects that are applied to local projects.
Consultation Comments related to the above suggestion
- Hold the state accountable to these standards. KYTC is the biggest offender. / KYTC needs to meet its own standards.
- State transportation projects are the biggest offenders.
- ODOT is exempt from local regulations.
- Public notice in April that KYTC will have its own MS4 stormwater permit and be responsible to meet the permit requirements, but it's not final.
- KYTC has a separate process for MS4 permits – it's self-policing.

Expand the scope of mitigation to include the ecological value of land developed.
Consultation Comments related to the above suggestion
- Why is it not being required to pay a mitigation fee that can be used to restore ecological service costs? There is value for trees/air quality, and value for wildlife habitat.
- [Mitigation fees should] pay for land impacted, not just for streams.
- [Mitigation should provide] money to purchase land somewhere else. Cover the cost of the ecological value of land developed. / Mitigation fee [should] cover the cost of land whose ecological value is taken.
- [Preceding suggestion] would be a significant expense [given the] ... Increasing importance of greenspace.
- [Mitigation should cover the cost of] The ecological service that land gave: value of trees, retaining rainwater, habitat...
- Extend [mitigation requirements] to land, not just streams.
- Mitigate the impacts of impervious surface
- The current [fixed] funding mechanisms are not conducive to environmental avoidance strategies. (We rely on fixed ways to obtain transportation funding, such as vehicular counts, license fees, and gasoline tax revenues.)

**Inform environmental agencies of potential mitigation needs as soon as possible.** Time is critical for developing optimal strategies that can reduce costs and environmental impacts.

**Consultation Comments related to the above suggestion**
- The sooner the state [environmental protection agency] knows about a project that may encroach on special waters, the better -- it gives time to work with the project sponsor and look at options. Need to be out in front with permit projects.
- For threatened species, U.S. Fish and Wildlife is involved. Timeliness is appreciated. Avoidance is not always possible, but best to discuss/work on front end.
- Impacts often dictate design. If a project impacts certain resources, ODOT is required to pay for compensatory mitigation. When review begins, ODOT is advised to get Ohio EPA involved earlier on in the process. That way, Ohio EPA can help assess the required mitigation and help select alternative corridors.

**Reduce the use of culverts and stream piping.**

**Consultation Comments related to the above suggestion**
- Culvert impacts are a concern -- culverts can fragment streams by prohibiting passage of organisms, but we don't have scientific proof. Incentives are needed to reduce use of culverts/practices and design with adverse impacts. Trying to get ODOT to change standards, but ODOT says BMPs and certain structural alternatives are cost prohibitive.
- Stop piping of streams
- Feeder streams are gone – they're in pipes./In most urbanized streams, tributary drainage is almost completely gone – poses a serious challenge in rain events. Water quality is compromised by runoff in urban areas.
- Incentives are needed to reduce use of culverts

**Design stream crossings to protect streams and wildlife.**

**Consultation Comments related to the above suggestion**
- OEPA wants to give ODOT a certain amount of compensatory mitigation if they use a clear-span bridge or 3-sided culvert – want to incentivize ODOT, and it seems to be working. This is not something that can work everywhere and/or on every project. Impacts often dictate design.
- KYTC is very aware of Outstanding State Resource Waters now. The agency takes special construction processes if needed, such as bridge span / KYTC is more aware of these OSRW streams and have guidance for how to approach projects -- progress is occurring.

**Ohio Presentation (selected notes)**
- Conventional bridge design: piers catch debris, restrict the flood plan, and may divide flow in times of high water
- Alternative bridge design: spans channel (no in-stream pier) - costs more money
- Conventional management of bridge deck runoff = runoff flows through scuppers in the deck and discharges directly to the river
- Preferred management of bridge deck runoff = runoff is diverted to vegetated area before it drains to the river

**Use BMPs (best management practices) to manage roadway runoff and avoid direct discharges to streams.** “The diversion of roadway runoff from direct entry into streams” was selected by some participants from planning and stormwater management agencies as the environmental concern that’s most feasible to address (comments included: it’s more do-able ... may be easier to do if regulated ... potential is offered by public roadways).

**Consultation Comments related to the above suggestion**
- Don’t allow pipes to discharge directly to streams -- allow stormwater to get to the stream but not directly. Figure out a way to provide for retention of roadway runoff so that pollutants are filtered.
- Water needs to collect into containment system rather than going direct into stream or reservoir. Permit for ODOT is contingent upon structure. ODOT is required to use certain standards for crossings of high quality streams/sources.
- A lot of subdivision regulations require curb and gutter, and now we want to get that requirement out of the regulations!
- There’s a difference between connected and disconnected impervious discharges to a stream.
- Transportation projects need up-front guidance for stormwater infiltration designs and practices.
- Need to work with ODOT to incentivize them. [OEPA is] working with ODOT on engineered shoulders that filter drainage and regulate flow/flood attenuation aspects. If put in these types of structures, ODOT can offset the need for compensatory mitigation. This is done on a case-by-case but becoming more frequent.
- Example of Ohio EPA offsetting ODOT mitigation requirements for using wetland design in BMPs for stormwater management/basin.
- Stormwater drainage ways can be sent through rain gardens or wetlands before entering a river.
- A lot of stormwater management opportunities are in the right-of-way. What can be done with right-of-way for runoff to slow down and soak in? Work with transportation engineers to better manage runoff.

**Use transportation improvements to advance sustainable development and protect or restore environmental resources – design improvements to optimize the use of public investment.**

**Consultation Comments related to the above suggestion**
- It’s not just transportation needs that matter, but also livability. The process driver is still transportation money. The criteria should be broadened.
- We need to look at land use and transportation from a dollar perspective rather than a political perspective. We treat the suburban commute as a God-given right.
- There’s a cost for not building in a sustainable way.
- One of the biggest issues is the price of gasoline. We need to invest more in transit. Our [transit] system is terrible -- it is not regional.
- Transit can apply transportation funding most strategically to advance environmental avoidance strategies.
- We continue to add roads, which increase impervious surface and new development. Need to look at conserving stream corridors and establishing riparian buffers and making improvements along existing roadways. Consider maintenance issues, and increase in water quality benefits.
- Need a re-evaluation of how we’re doing things/need to re-evaluate standard techniques.
- More [roads mean more] impervious surface.
- Need more alternative modes and fewer lane additions.
- We need to think of the bigger picture, such as potential revenue from ecotourism and recreational activities.

**Mow less, plant trees, and manage roadway right-of-way to protect and enhance environmental resources.**

*Consultation Comments related to the above suggestion*

- [Opportunity for enhancing or restoring environmental resources] is roadside maintenance.
- Mow for safety and allow the rest to revert to more natural habitat.
- ODNR Div of Wildlife tries to work with ODOT on mowing less. The District offices have the option of doing things differently from the central office. Roadside mowing could be reduced to what is absolutely necessary. There is no requirement for local DOTs to follow recommendations on this.
- Some areas along roadways are reforested, but ODOT has no interest in trees. In Michigan, the interstates/roadways are bordered by trees, but ODOT says no to trees along roadways because of safety. Studies show that road rage drops with trees. Maybe need to expand tree plantings in median and cloverleafs, but there may be concern about the deer population.
- Took 60 acres out of the mowing cycle and into natural habitat – it saved money – put in cost-efficiency. Environmental protective measures are the most cost protective. / Cost savings is selling point for not mowing.
Types of Project Impacts: Concerns and Suggestions
(Comments from Project-Level Review in OKI 2012 Environmental Consultations)

**Impacts to Streams**
Concern is for crossings of any stream, but especially streams that overlie aquifers or are relatively unimpaired or classified as Regionally Significant. Where roadways cross stream corridors, concerns are that streams and stream corridors be retained and that streams be protected from the impacts of roadway runoff.

Suggestions
- Increase the use of detention basins and roadside ditches
- Reduce the use of road salt (benefits to water resources, trees and vegetation, and wildlife; complicated by public expectations)
- Use road salt alternatives (slag is not a good alternative)
- Reduce the use of culverts
- Use clearspan bridges (span the floodplain and drain runoff to the land)

**Impacts from Roadway Runoff**
Concern is for managing roadway runoff so as to minimize the harmful effects of its pollutants, temperature, volume, and velocity on environmental resources. (Roadway runoff is a major source of stream impairments.)

Suggestions
- Divert roadway runoff in combined sewer areas to separate sewers or streams (after filtration/pretreatment)
- Increase the use of green infrastructure for managing runoff
  - Use existing swales or detention basins if available
  - Increase use of detention basins and roadside ditches
  - Increase use of exfiltration treatment (in the curb-and-gutter system) where right-of-way is limited and streams need protection
  - Increase use of pervious pavement treatments
- Acquire/expand right-of-way sufficient to allow for green infrastructure/best management practices

**Impacts from Floodways Projects**
Concern is for the cumulative effect of in-floodway transportation projects on increased downstream flooding. Participants cited increased flood damage in communities along part of the Ohio River as a result of additional fill from roadways and other development projects.

Suggestions
- Keep project fill out of the floodways
- Keep projects out of the floodway
- Use bridges that span the floodway

**Impacts to Agricultural Districts**
Concern about transportation projects that use or encroach on Agricultural Districts is for the cost of mitigation and for the loss of farming in areas where property-owners have enrolled their land in state programs that provide protection for 5-year intervals.

**Impacts from Development**
Concern can be greater for the development impacts that follow roadway improvements than for the direct project impacts, especially in areas with little development.

Suggestion
- Use compact or conservation development in developing areas.

**Impacts to Hydric Soils and Headwater Streams**
Concern is for impacts that reduce these limited resources that help sustain rare native plant and animal species.

Suggestion
- Overlay resource data with transportation project locations early on (to optimize opportunity to avoid adverse impacts)
Suggestions for Using Transportation Projects for Environmental and Community Benefits

(Based on comments in the Project-Level Review of OKI 2012 Environmental Consultations)

| **Divert roadway runoff from the combined sewer system** (reduces cost for treatment or overflow reduction). Diversion to streams (after pre-treatment) increases stream base flow and improves aquatic habitat, which is especially appropriate for upstream areas. |
| **Add pervious pavement treatments.** |
| **Add trees to roadway right-of-way** (or median or cloverleafs) |
| **Include sufficient right-of-way for installing green infrastructure to manage roadway runoff** |
| **Optimize the environmental benefits of maintenance practices**  |
| • Reduce mowing and expand natural or native vegetation (mow for safety and allow the rest to revert to more natural habitat) |
| **Add trails** |
| **Optimize mitigation benefits**  |
| • Concentrate compensatory mitigation in the watershed where impacts occurred (priority over use of consolidated mitigation site) |
| • Develop mitigation agreement concurrent with or after project development (not before, in case additional impacts arise) |
Appendix D-15
Consultation Comments on Suggestions for Regional-level Support of Environmental Protection

The following “consultation comments” include a reference to “OKI” or were provided in response to the question “How could OKI better support local efforts to conserve or protect environmental resources?” or in response to inquiry about county and regional maps.

Continue evaluation and further refinement of OKI’s transportation scoring and prioritization process to promote better environmental protection and expanded mode choice.

ODNR presentation
- Encourage projects to avoid in-stream work (encourage clear spanning of channels), avoid floodplain fill (encourage elevated approaches), use scuppers in bridges (or improve stormwater treatment), avoid areas with rare species or sensitive or unique features, and limit the number of stream crossings; apply the same principals to all tributaries
- Factors that should be considered in transportation project planning include enhanced stormwater treatment, no floodplain development, protection of tributary streams and ravines, stream channel/habitat protection, riparian forest protection, protection of sensitive areas/unique features, limits on imperviousness, and alternative wastewater treatment/limits

Consultation Comments
- OKI should award more points for making environmental choices and avoiding harmful choices.
- Transportation projects differ from development projects. Transportation projects are easier to classify and to grade with an environmental strategy point system.
- OKI transportation plan should avoid adverse impacts by setting a quality point ranking system.
- Some form of watershed or infrastructure plan conformance should be a requirement for transportation projects. We need to incentivize a project to avoid environmental areas by awarding it points for doing so.
- It’s not just transportation needs that matter, but also livability. The process driver is still transportation money. The criteria should be broadened.
- Alternative transportation is considered after thru roads built. Any plans for buses?/ Where does alternative transportation fit into what OKI does?
- Need more alternative modes and fewer lane additions/lane additions could be reduced if less need for SOV travel.
- Sidewalks. Enable people to walk. Uncomfortable to walk without sidewalks

Use OKI forums to collaboratively discuss environmental issues and strategies to address them.

Consultation Comments
- Use OKI’s Regional Planning Forum or similar mechanisms to pool jurisdictions/agencies to discuss development standards. Consider who should participate besides the Planning and Zoning Director -- others from the county who are involved in [land use planning] and enforcement and zoning. Director attends but does not represent a lot of jurisdictions or development organizations in the county. Hold forums at different locations to get broader participation. Elected officials’ involvement is key (example of county commissioners at water quality meetings).
- We should pick ten priorities, such as improving water quality or preserving forested tracts. Each priority should then be assigned a list of best management practices to help satisfy it.
- Talk to Oxbow Inc. relative to mitigation areas / Involve Oxbow representatives to learn about mitigation opportunities.

**Continue mapping of environmental resource data and other information applicable to planning for environmental resource protection.**

**Consultation Comments**
- The map should show the connectivity of greenspaces along the Little Miami River.
- Volumes of greenspace data are noted in the Eastern Corridor files.
- Show greenway connectivity plans.
- Show hydric soils and headwater streams
- What is the shape of forest? Where are old growth areas? Do we have an inventory? What is the inventory of forest condition?
- There’s some statewide analysis that can be made available, but it doesn’t talk about quality/size -- just shows significant cover
- OKI’s maps do not show some of the urban parks, which tend to have a higher environmental value than rural parks, which are more likely to be surrounded by undeveloped and wooded areas.
- There is a wealth of GIS data out there
- Wetland categories 2 and 3
- Add airport runways on county map
- [Check maps for notes]

**Support local agency efforts to protect environmental resources by developing and providing model regulations, cost benefit data, funding sources, sites of demonstration projects, and other relevant information.**

**Consultation Comments**
- Identify/create model regulations for locals to work with.
- Identify the obstacles to people who want to be innovative but are stymied by regulations. Identify alternatives and examples for changes to zoning codes and subdivision regulations. Provide a guide for removing obstacles and providing incentive -- a "Development for Dummies."
- Need better/more accurate understanding of costs. OKI could help with cost -- with understanding and education.
- Education of economic costs and benefits – of both technical and legal
- [Need for] Legal educational material to justify stream setbacks
- How can zoning be applied to preserve water quality? How is that enforceable per current law? Develop information on legal basis to apply zoning for conservation and for [protecting] stream quality
- What OKI could do: Provide real life examples, not just serve as a clearinghouse. Help find money for multimodal/specific projects. Show local agencies where good projects are working, so can encourage community to do similar/proactively assist with finding examples that add value to existing projects. Provide technical assistance.
- On a regional level, compile a list of demo projects (BMP implementation sites) for developers to check out, e.g. practices that improve stormwater quality – include data on costs, and maybe source for appropriate aggregates for rain gardens – statewide research = hard to find counties with right aggregate for raingardens – maybe even specifications / OKI could create a database of existing projects so that people know what sites to check out. Also provide a list of places that are experts in this particular area, since many companies are not qualified to implement these projects
- Need studies on small watershed scale with good BMPs, like Shepherd Creek. MSD maybe has info on parts of Lick Run project. Work with MSD to get examples
- Provide info on Silva cells.
- Have a good website
- Option for OKI website for environmental articles and BMPs – send out request for good articles – link to OKI can be included in workshops on invasives, etc

**Coordinate with state and local agencies to advance better stormwater management in transportation project design.**

**Consultation Comments**
- Work with transportation engineers to better manage runoff
- OKI should work with locals to facilitate BMPs. If incorporate BMPs into transportation projects, they will be visible. OKI could work with local to implement BMP projects so that there are examples to look at.

**Continue public education efforts that provide perspective on the value of protecting environmental resources.**

**Consultation Comments**
- Needs to be a better understanding of economic costs of “protect the streams not yet degraded” – OKI can help show economic benefits/costs and local examples to share. Consider cost of maintenance and cost to property owner, and stormwater management issues. / Need better/more accurate understanding of costs. OKI could help with cost -- with understanding and education
- It’s important for the OKI Region to maintain the gains in environmental quality that have been made, especially the improvements made by infrastructure, such as wastewater treatment plants. Many of these plants are now 30 years old, and it’s important to upgrade or enhance or maintain them. Efforts to maintain point sources are starting to slip – it’s important to not let that go.
- OKI could expand education efforts, particularly using land cost evidence.
- Need better/more accurate understanding of costs. OKI could help with cost -- with understanding and education.
- Sustained value of land if used for conservation
- Resource conservation/avoidance strategies can’t happen without education of public officials and the public.
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