



*1998 Volume I  
Addendum:  
Stream Segment Summaries (95-96)*

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*1998*

*Division of Surface Water  
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**1998 Ohio Water Resource Inventory:**  
Addendum to 1996 Volume 1:  
Data Appendix

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## Appendix A

### Aquatic life use and biological integrity status of Ohio streams sampled during 1995 and 1996 (1998 assessment cycle)

Appendix A contains a listing of the stream segments monitored and assessed in Ohio during the 1995 and 1996 field years. A key to this appendix is on the next page. Most segments have a short narrative that is a brief summary of the status of the segment and associated stressors or threats if applicable. Most segments have more detailed information available in Ohio EPA "Technical Support Documents (TSDs)" produced for most watersheds in the state. Many of these will be available on the Division of Surface Water's web site in Adobe Acrobat (pdf) format. Future electronic versions of Appendix A will have a link on each summary that will take the reader directly to the TSD. Starting in 1999, this appendix will be updated yearly instead of biennially.

# Key to Appendix A

Code given to each segment of a stream or river. Segments in Ohio can range from about 1 to 15 mi in length. First two characters (OH) indicate 'Ohio', next two digits indicate one of 93 subbasins (e.g., 4 = Little Beaver Creek), remainder identifies the specific segment.

The "River Code" identifies an entire individual stream. The first two digits indicate the Major Basin (e.g., 02 = Scioto River Basin) and the last three digits the specific creek (e.g., 02-200 = Big Darby Creek)

The upper and lower river miles are the boundaries of the WBID segment. Rivers are "miled" from their mouth in an upstream direction.

The ecoregion refers to one of Omernik's ecoregions, which have been identified for the entire US. Ohio has five ecoregions at this scale: HELP - Huron Erie Lake Plain, IP - Interior Plateau, EOLP - Erie Ontario Lake Plain, WAP - Western Allegheny Plateau, and ECBP - Eastern Corn Belt Plain ecoregion.

**WBID#**  
OH 4 27

**River Code**  
08-300

**Upper River Mile: Lower River Mile**  
15.99 0.00

**Ecoregion: WAP**  
County: COLUMBIANA

**WB Name: West Fork (Brush Creek to Middle Fork)**

**Aquatic Life Use(s): EWH**

**Segment Length: 15.99**

**USEPA Reach Code: 05030101-**

**Assesment Cycle: 98**

**Data Collection Period: 9608 to 9608**

**Assessment Age: Current**

Is data current?

**Aquatic Life Use Attainment:**

**Full: 0.00 Full, But Threatened: 15.99 Partial: 0.00 None: 0.00 Not Assessed: 0.00**  
**Narrative Assessment Excellent: 15.99 Good: 0.00 Fair: 0.00 Poor: 0.00 Very Poor: 0.00**

Short summary of condition of segment

**Comments:** This segment is threatened by coal mining operations.....

**Causes of Impairment**

**Sources of Impairment:**

**Siltation - T**

**Surface Mining - T**

This is the year(s) and month(s) during which field sampling took place

This is the actual "agent" deemed responsible for the observed impairment

This is origin of the agent (i.e., cause) of the impairment

Another river segment coding system used by USEPA. The first eight digits refer to the USGS basin code, the next digits (missing here) would identify the individual stream segment

The aquatic life use attainment refers to attainment of Ohio's water quality standards. For most segments this was determined based on Ohio's biocriteria (fish and/or macroinvertebrate communities). Full means all biological indices meet criteria; Full, But Threatened means it is meeting criteria but some activity may threaten this condition in the near future (e.g., coal mining in above example); partial means one index is meeting and one or more is not; and none means no index is meeting or at least one is in the poor or very poor narrative range.

This is the magnitude (i.e., relative contribution) of that cause or source of impairment. H - high magnitude, M - moderate magnitude, S - slight magnitude, T - identifies a threat.

The WB name is the name of the stream segment. Most are logically delineated by confluences with major tribs. This segment of the West Fork of Little Beaver Creek extends from its confluence with Brush Creek to its confluence with the Middle Fork of Little Beaver Creek. Since the lower river mile is 0.00, this is its mouth.

Narrative assessment are ranges of biological quality or integrity based on fish and/or macroinvertebrate community data.

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH 4 27</b>	<b>08-300</b>	<b>15.99</b>	<b>0.00</b>	County: <b>COLUMBIANA CO</b>	
WB Name: <b>WEST FORK (BRUSH CREEK TO MIDDLE FORK)</b>				USEPA Reach Code: <b>05030101-</b>	
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>15.99</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9608 to 9608</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>15.99</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>15.9</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: This segment is threatened from coal mining operations. Coal fines were recently observed in the substrates. Although the stream has a high quality biological community, the threat from mining in the uplands of the tributaries is of concern.			Sources of Impairment:		
Causes of Impairment: Siltation - T			Surface Mining - T		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH 5 3</b>	<b>06-210</b>	<b>12.70</b>	<b>0.00</b>	County: <b>JEFFERSON CO</b>	
WB Name: <b>MCINTYRE CREEK</b>				USEPA Reach Code: <b>05030101-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>12.70</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9608 to 9608</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>2.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>10.70</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>2.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: One regional reference site was sampled near the the mouth in 1996. Fish and macroinvertebrate communities have remained stable since 1983.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH 5 12</b>	<b>06-203</b>	<b>5.60</b>	<b>0.00</b>	County: <b>JEFFERSON CO</b>	
WB Name: <b>CEDAR LICK CREEK</b>				USEPA Reach Code: <b>05030101-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>5.60</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9608 to 9608</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>5.60</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>5.6</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: One regional reference site near the mouth was sampled in 1996. This is a high quality stream. Biological scores have remained stable since 1983, well into the Exceptional Warmwater Habitat range.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH 5 71</b>	<b>06-931</b>	<b>8.90</b>	<b>0.00</b>	County:	
WB Name: <b>ELKHORN CREEK</b>				USEPA Reach Code:	<b>05030101-</b>
Aquatic Life Use(s):	<b>EWH</b>	Segment Length:	<b>8.90</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9608 to 9608</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>8.90</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>8.9</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> One regional reference site sampled in 1996 showed a noticeable improvement in the fish community compared to sampling done in 1983. The fish results improved from Warmwater Habitat range (IBI=39) to the Exceptional Warmwater Habitat range (IBI=50). The macroinvertebrates were rated good based on qualitative sampling results.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH 5 72</b>	<b>06-932</b>	<b>4.80</b>	<b>0.00</b>	County:	<b>CARROLL CO</b>
WB Name: <b>STRAWCAMP RUN</b>				USEPA Reach Code:	<b>05030101-037</b>
Aquatic Life Use(s):	<b>EWH</b>	Segment Length:	<b>4.80</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9608 to 9608</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>4.80</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>4.8</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This is a high quality stream. The biological community has remained stable within the Exceptional Warmwater Habitat range since 1983.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH 5 76</b>	<b>06-900</b>	<b>34.05</b>	<b>25.85</b>	County:	
WB Name: <b>YELLOW CREEK (HEADWATERS TO ELKHORN CREEK)</b>				USEPA Reach Code:	<b>05030101-019</b>
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>8.20</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9608 to 9609</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>4.15</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.95</b>
				None:	<b>0.00</b>
					Not Assessed: <b>3.10</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.1</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> A slight impact was noted downstream from the confluence of Goose Creek. Faulty septic systems were the major source of nutrient enrichment.					
Causes of Impairment:			Sources of Impairment:		
Nutrients - H			Onsite wastewater systems (septic tanks) - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH 5 79</b>	<b>06-938</b>	<b>3.80</b>	<b>0.00</b>	County: <b>JEFFERSON CO</b>	
WB Name: <b>GOOSE CREEK</b>				USEPA Reach Code: <b>05030101-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>3.80</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9608 to 9609</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>1.80</b>	Full, But Threatened: <b>1.10</b>	Partial: <b>0.90</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>1.8</b>	Good: <b>1.1</b>	Fair: <b>0.9</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> Fish sampling was done at 3 sites in this segment, and ranged from fair to excellent. Habitat was good throughout the reach. This segment was in attainment of Warmwater Habitat criteria except for one site at the mouth in the town of Amsterdam.</p> <p>Causes of Impairment: Nutrients - H Metals - S</p> <p>Sources of Impairment: Onsite wastewater systems (septic tanks) - H Mine tailings - S</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH 6 1</b>	<b>06-500</b>	<b>12.74</b>	<b>0.00</b>	County: <b>BELMONT CO</b>	
WB Name: <b>MCPAHON CREEK (WILLIAMS CREEK TO OHIO RIVER)</b>				USEPA Reach Code: <b>05030106-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>12.74</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9608 to 9609</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>2.80</b>	None: <b>0.00</b>	Not Assessed: <b>9.94</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.8</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> Mining is present within this basin. One regional reference site at river mile 2.3 showed significant improvement in the IBI compared to sampling done in 1983. However, the macroinvertebrates appear to be affected by poor quality substrates (silt, muck). The macroinvertebrate communities have remained in the fair to poor range. Water chemistry data showed little or no elevation in parameters associated with mining activities. A slug of mine-affected water may have passed through this segment recently. Future monitoring is recommended.</p> <p>Causes of Impairment: Siltation - H</p> <p>Sources of Impairment: Surface Mining - H</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH 6 75.1</b>	<b>06-087</b>	<b>2.27</b>	<b>0.00</b>	County: _____	
WB Name: <b>BLOCKHOUSE HOLLOW</b>				USEPA Reach Code: <b>05030106-</b>	
Aquatic Life Use(s): <b>LRW</b>		Segment Length: <b>2.27</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9609 to 9609</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.27</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>2.2</b>
<p><b>Comments:</b> This segment is designated Limited Resource Water (LRW). It cannot attain Warmwater Habitat (WWH) criteria based on the small drainage area and high stream gradient, along with discharges of wastewater from a steel mill.</p> <p>Causes of Impairment: Flow alteration - H Metals - H</p> <p>Sources of Impairment: Hydromodification - H Major Industrial Point Source - H</p>					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH 7 1</b>	<b>06-700</b>	<b>14.68</b>	<b>0.00</b>	County: <b>MONROE CO</b>	
WB Name: <i>SUNFISH CREEK (PINEY FORK TO OHIO RIVER)</i>				USEPA Reach Code: <b>05030201-</b>	
Aquatic Life Use(s): <b>WWH, EWH, WWH</b>		Segment Length: <b>14.68</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9608 to 9609</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>5.59</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>9.09</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.5</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment is divided between Warmwater Habitat (WWH) and Exceptional Warmwater Habitat (EWH). Only the WWH portion was monitored in 1996. At river mile 7.1 there was a modest decline in the fish community compared to sampling done in 1991, but scores were still well within the WWH range. However, there has been a notable decline in the IBI since 1983 when the scores were in the EWH range. Future monitoring is recommended to follow the downward trend.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH 7 5</b>	<b>06-700</b>	<b>31.40</b>	<b>14.68</b>	County: <b>MONROE CO</b>	
WB Name: <i>SUNFISH CREEK (HEADWATERS TO PINEY FORK)</i>				USEPA Reach Code: <b>05030201-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>16.72</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9608 to 9608</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>16.72</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>16.7</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> One regional reference site sampled in 1996 showed a modest decline in the fish community compared to sampling done in 1983, but results were still with Warmwater Habitat criteria.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH 7 7</b>	<b>06-705</b>	<b>4.80</b>	<b>0.00</b>	County: <b>MONROE CO</b>	
WB Name: <i>EAST FORK PINEY FORK</i>				USEPA Reach Code: <b>05030201-096</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>4.80</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9609 to 9609</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>4.00</b>	Full, But Threatened: <b>0.80</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>4.0</b>	Fair: <b>0.8</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Sampling was done near the Beallsville WWTP. There is very low flow upstream from the plant due to the small drainage area. Downstream from the WWTP the fish community was meeting Warmwater Habitat criteria. The Beallsville WWTP has been operating very well.					
Causes of Impairment: Organic enrichment/DO - T			Sources of Impairment: Minor Municipal Point Source - T		

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WBID #: <b>OH 7 10</b>	River Code: <b>06-708</b>	Upper River Mile: <b>6.70</b>	Lower River Mile: <b>0.00</b>	Ecoregion: <b>WAP</b>
WB Name: <b>BAKER FORK</b>				County: <b>MONROE CO</b>
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>6.70</b>		
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9608 to 9609</b>	Assessment Age: <b>Current</b>		
Aquatic Life Use Attainment:				
Full: <b>6.70</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>6.7</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>
				Very Poor: <b>0.0</b>
<b>Comments:</b> One regional reference site was sampled near the mouth in 1996. The IBI declined dramatically compared to sampling done in 1983, dropping from 53 to 42. The macroinvertebrates remained stable. Future monitoring is recommended to follow the downward trend of the fish community.				

WBID #: <b>OH 7 18</b>	River Code: <b>06-100</b>	Upper River Mile: <b>18.02</b>	Lower River Mile: <b>0.00</b>	Ecoregion: <b>WAP</b>
WB Name: <b>CAPTINA CREEK (BEND FORK TO OHIO RIVER)</b>				County: <b>BELMONT CO</b>
Aquatic Life Use(s): <b>EWH, WWH</b>		Segment Length: <b>18.02</b>		
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9609 to 9610</b>	Assessment Age: <b>Current</b>		
Aquatic Life Use Attainment:				
Full: <b>18.02</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>18.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>
				Very Poor: <b>0.0</b>
<b>Comments:</b> One regional reference site was sampled in this segment in 1996. The stream is high quality, and is clearly within the Exceptional Warmwater Habitat range.				

WBID #: <b>OH 7 19</b>	River Code: <b>06-101</b>	Upper River Mile: <b>7.20</b>	Lower River Mile: <b>0.00</b>	Ecoregion: <b>WAP</b>
WB Name: <b>CAT RUN</b>				County:
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>7.20</b>		
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9608 to 9608</b>	Assessment Age: <b>Current</b>		
Aquatic Life Use Attainment:				
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>7.20</b>	Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>7.2</b>	Poor: <b>0.0</b>
				Very Poor: <b>0.0</b>
<b>Comments:</b> The cause of non-attainment is unknown. Good habitat, substrates and riparian were all present.				
Causes of Impairment: Flow alteration - H			Sources of Impairment: Natural - H	

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH 7 24</b>	<b>06-106</b>	<b>13.00</b>	<b>0.00</b>	County:	<b>BELMONT CO</b>
WB Name: <b>BEND FORK</b>				USEPA Reach Code:	<b>05030106-050</b>
Aquatic Life Use(s): <b>WWH, EWH</b>		Segment Length: <b>13.00</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9608 to 9608</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>13.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>13.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> One regional reference site upstream from the Bethesda WWTP was sampled in 1996. Significant improvement was noted in the fish community compared to sampling done in 1983. The macroinvertebrates have remained stable within the good range.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH 7 28</b>	<b>06-100</b>	<b>25.42</b>	<b>18.02</b>	County:	<b>BELMONT CO</b>
WB Name: <b>CAPTINA CREEK (NORTH/SOUTH FORKS TO BEND FORK)</b>				USEPA Reach Code:	<b>05030106-051</b>
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>7.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9608 to 9608</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>7.40</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>7.4</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> One regional reference site was sampled in this segment in 1996. Biological results have been in the upper range of Exceptional Warmwater Habitat for the last 15 years. Water chemistry results also indicate good water quality.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH 7 39</b>	<b>06-117</b>	<b>14.00</b>	<b>0.00</b>	County:	<b>BELMONT CO</b>
WB Name: <b>SOUTH FORK CAPTINA CREEK</b>				USEPA Reach Code:	<b>05030106-053</b>
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>14.00</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9609</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>14.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>14.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> One regional reference site near the mouth was sampled in 1996. While the fish results showed near attainment of Exceptional Warmwater Habitat (IBI=48), there was a dramatic decline from sampling done in 1983 (IBI=57). The macroinvertebrates were rated excellent based on qualitative sampling results. Water chemistry results indicated high quality of water. Future monitoring is recommended to follow the downward trend in the fish community.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH 8 18</b>	<b>06-420</b>	<b>7.00</b>	<b>0.00</b>	County: <b>WASHINGTON CO</b>	
WB Name: <b>ARCHERS FORK</b>				USEPA Reach Code: <b>05030201-064</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>7.00</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9608 to 9608</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>7.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>7.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Two regional reference sites sampled in the lower 2.2 miles indicated excellent water quality. The fish community at river mile 2.2 improved significantly since 1983, with the IBI rising from 44 to 52. The macroinvertebrates were rated very good to excellent based on qualitative sampling results.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH10 1</b>	<b>17-500</b>	<b>86.70</b>	<b>73.10</b>	County:	
WB Name: <b>TUSCARAWAS RIVER (PIGEON RUN TO SANDY CREEK)</b>				USEPA Reach Code: <b>05040001-029</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>13.60</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9508</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>13.60</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>10.9</b>	Very Poor: <b>2.7</b>
<b>Comments:</b> Sampling in this segment was done in response to a crude oil spill which occurred in 1995. No significant biological impairment associated with the spill was noted. Biological results showed non-attainment of Warmwater Habitat criteria throughout the reach. Fish communities were in the fair to poor range. Contaminated sediments and municipal wastewater appear to have a strong negative influence on the fish populations. A high incidence of Carp with head deformities was noted. A fish consumption advisory is in effect for this segment of the Tuscarawas River.					
Causes of Impairment:			Sources of Impairment:		
Priority organics - H		Industrial Point Sources - H			
Metals - M		Contaminated sediments - M			
Organic enrichment/DO - M		Municipal Point Sources - M			

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:		
<b>OH10 33.4</b>	<b>17-581</b>	<b>2.96</b>	<b>0.00</b>		Ecoregion: <b>EOLP</b>
WB Name: <i>TRIB. TO TUSCARAWAS RIVER (UNIONTOWN)</i>					County: <b>SUMMIT CO</b>
Aquatic Life Use(s): <b>NONE</b>					USEPA Reach Code: <b>05040001-</b>
Segment Length: <b>2.96</b>					
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9506 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>1.06</b>
					Not Assessed: <b>1.90</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>1.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> An unauthorized dam/causeway was installed across the stream cutting off access to the headwaters. Elevated levels of fecal coliforms suggests septic and runoff problems. Under low flow these conditions result in stress to the biological communities. Instream habitat was fully capable of supporting a WWH community. Removal of the dam should permit this segment to recover.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H			Dam construction - H		
Flow alteration - H			Land development/Suburbanization - M		
Pathogens - S					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:		
<b>OH11 16</b>	<b>17-450</b>	<b>29.10</b>	<b>17.40</b>		Ecoregion: <b>EOLP</b>
WB Name: <i>SANDY CREEK (STILL FORK TO LITTLE SANDY CREEK)</i>					County:
Aquatic Life Use(s): <b>WWH</b>					USEPA Reach Code: <b>05040001-027</b>
Segment Length: <b>11.70</b>					
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9606 to 9608</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>7.50</b>
					Not Assessed: <b>4.20</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.5</b>	Very Poor: <b>7.0</b>
<b>Comments:</b> Poor and very poor fish communities existed downstream from the Minerva WWTP. Lack of water chemistry data does not allow for a complete determination of the cause/source of impairment. High levels of ammonia were discharged to Sandy Creek during 1995 by the Minerva WWTP. PCB concentrations in tissue samples of Carp exceeded water quality criteria.					
Causes of Impairment:			Sources of Impairment:		
Unknown toxicity - H			Municipal Point Sources - H		
			Source Unknown - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH11 21</b>	<b>17-470</b>	<b>16.10</b>	<b>0.00</b>	County:	
WB Name: <i>STILL FORK SANDY CREEK</i>				USEPA Reach Code: <b>05040001-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>16.10</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9608</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>6.00</b>	None: <b>0.00</b>	Not Assessed: <b>10.10</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>6.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> There was some decline in the fish community at the mouth compared to sampling done in 1993. Masco Tech no longer discharges directly to the Still Fork. They now discharge to the Minerva WWTP. Causes of Impairment: Flow alteration - M, Other habitat alterations - H, Siltation - M, Nutrients - S, Metals - S Sources of Impairment: Dam construction - M, Pasture land - H, Minor Industrial Point Source - S					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH11 28</b>	<b>17-450</b>	<b>38.00</b>	<b>29.07</b>	County:	
WB Name: <i>SANDY CREEK (HEADWATERS TO STILL FORK)</i>				USEPA Reach Code: <b>05040001-027</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>8.93</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9608</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>5.80</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.30</b>	None: <b>0.00</b>	Not Assessed: <b>2.83</b>	
Narrative Assessment:	Excellent: <b>2.6</b>	Good: <b>3.2</b>	Fair: <b>0.3</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> There was a small area of impact adjacent to the Minerva WWTP. Causes of Impairment: Pesticides - H Sources of Impairment: Irrigated crop production - H					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH15 31</b>	<b>17-500</b>	<b>65.50</b>	<b>58.10</b>	County:	
WB Name: <i>TUSCARAWAS RIVER (CONOTTON CREEK TO SUGAR CREEK)</i>				USEPA Reach Code: <b>05040001-023</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>7.40</b>			

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Assessment Cycle: **98**      Data Collection Period: **9506 to 9508**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>	None:	<b>1.50</b>	Not Assessed:	<b>5.90</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>1.5</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>				

**Comments:** Sites were sampled upstream from Dover Dam, a flow-through flood control dam. Habitat conditions range from free-flowing to impounded. The fish community scored in the poor range. Macroinvertebrates scored in the very good range. Sediments are known to be contaminated in this segment. There was a high incidence of Carp with head deformities. A fish consumption advisory is in effect for this segment of the Tuscarawas River.  
 Causes of Impairment: \_\_\_\_\_ Sources of Impairment: \_\_\_\_\_

Priority organics - H  
 Flow alteration - M  
 Siltation - M

Contaminated sediments - H  
 Flow regulation/modification - M

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH15 32</b>	<b>17-500</b>	<b>73.10</b>	<b>65.50</b>	Ecoregion: <b>WAP</b> County: _____ USEPA Reach Code: <b>05040001-</b>
WB Name: <b>TUSCARAWAS RIVER (SANDY CREEK TO CONOTTON CREEK)</b>				
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>7.60</b>		

Assessment Cycle: **98**      Data Collection Period: **9506 to 9508**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>7.10</b>	None:	<b>0.50</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>7.1</b>	Poor: <b>0.5</b>	Very Poor: <b>0.0</b>				

**Comments:** Biological communities in this segment ranged from fair (fish) to very good (macroinvertebrates). Contaminated sediments appear to be influencing the fish populations based on low species diversity and a high incidence of Carp with head deformities. A fish consumption advisory is in effect for this segment of the Tuscarawas River.  
 Causes of Impairment: \_\_\_\_\_ Sources of Impairment: \_\_\_\_\_

Priority organics - H  
 Organic enrichment/DO - S

Municipal Point Sources - M  
 Contaminated sediments - H

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH18 27</b>	<b>17-674</b>	<b>18.30</b>	<b>0.00</b>	Ecoregion: <b>EOLP</b> County: _____ USEPA Reach Code: <b>05040003-022</b>
WB Name: <b>NORTH BRANCH KOKOSING RIVER</b>				
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>18.30</b>		

Assessment Cycle: **98**      Data Collection Period: **9505 to 9505**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>2.60</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>	None:	<b>0.00</b>	Not Assessed:	<b>15.70</b>
Narrative Assessment:	Excellent: <b>2.6</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>				

**Comments:** One site in this segment was sampled as part of Ohio State University's Zoology 626 class. The fish community scored well into the Exceptional Warmwater Habitat range. Land use is a combination of row crop agriculture and pasture land. There are no apparent water quality or biological problems in this segment.

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH20 2</b>	<b>17-960</b>	<b>19.70</b>	<b>0.00</b>	County:	
WB Name: <b>WAKATOMIKA CREEK (BRUSHY FORK TO MUSKINGUM RIVER)</b>					
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>19.70</b>		USEPA Reach Code: <b>05040004-</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9608 to 9608</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>5.70</b>	Full, But Threatened: <b>14.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>19.7</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment is currently meeting Exceptional Warmwater Habitat criteria, but is threatened by major road construction and by proposed large-scale land development near Frazeesburg. Habitat destruction is also a factor in one stretch of stream which was clear-cut of all trees along the banks. Future monitoring is recommended to assess the long-term effects of development and road construction within the basin.					
Causes of Impairment:			Sources of Impairment:		
Siltation - T			Construction - T		
			Highway/road/bridge/sewer line - T		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH22 2.1</b>	<b>17-281</b>	<b>0.83</b>	<b>0.00</b>	County: <b>MUSKINGUM CO</b>	
WB Name: <b>TRIB. TO TIMBER RUN (RM 5.02)</b>					
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>0.83</b>		USEPA Reach Code: <b>05040006-</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9509 to 9509</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.63</b>	Full, But Threatened: <b>0.20</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.8</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Macroinvertebrate results suggest this segment is Coldwater Habitat. Marginal impairment was noted downstream from the West Muskingum WWTP.					
Causes of Impairment:			Sources of Impairment:		
Organic enrichment/DO - H			Minor Municipal Point Source - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH22 4</b>	<b>17-203</b>	<b>6.00</b>	<b>0.00</b>	County:	
WB Name: <b>BARTLETT RUN</b>					
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>6.00</b>		USEPA Reach Code: <b>05040006-042</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9509 to 9509</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.10</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>1.10</b>	Not Assessed: <b>4.80</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.1</b>	Fair: <b>1.1</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Macroinvertebrate communities showed degradation in both the natural and channelized areas of this segment. Biological quality improved downstream from the Vistaview WWTP. Macroinvertebrates were impaired downstream from the Lebar and Crestmont WWTPs.					
Causes of Impairment:			Sources of Impairment:		
Organic enrichment/DO - H			Package Plants (Small Flows) - H		
Other habitat alterations - H			Hydromodification - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH22 4.1</b>	<b>17-282</b>	<b>0.85</b>	<b>0.00</b>	County: <b>MUSKINGUM CO</b>	
WB Name: <i>TRIB. TO BARTLETT RUN (RM 2.76)</i>				USEPA Reach Code: <b>05040006-</b>	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>0.85</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9509 to 9509</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.85</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.8</b>
<b>Comments:</b> Macroinvertebrates were severely impacted in this segment, scoring in the very poor range. Habitat was good, and representative of natural headwaters conditions. A very strong sewage odor was present, with extensive growths of sewage fungus. The Ash Meadow WWTP, as well as upstream septic discharges, were causing the impacts.			<b>Sources of Impairment:</b>		
Causes of Impairment: Organic enrichment/DO - H			Package Plants (Small Flows) - M		
			Onsite wastewater systems (septic tanks) - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH22 6</b>	<b>17-204</b>	<b>9.70</b>	<b>0.00</b>	County:	
WB Name: <i>BIG RUN</i>				USEPA Reach Code: <b>05040006-002</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>9.70</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9509 to 9509</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>9.70</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>9.7</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH22 6.1</b>	<b>17-283</b>	<b>0.81</b>	<b>0.00</b>	County: <b>MUSKINGUM CO</b>	
WB Name: <i>TRIB. TO BIG RUN (RM 1.30)</i>				USEPA Reach Code: <b>05040006-</b>	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>0.81</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9509 to 9509</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.20</b>	Full, But Threatened: <b>0.10</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.51</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.3</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is a good quality, small headwaters stream with high gradient and a forested riparian corridor. The macroinvertebrate community ranged from good to marginally good. The taxa present in the community suggest Coldwater Habitat. The Stonehenge WWTP has a slight impact on the biota, but conditions are still in attainment of goals of the Clean Water Act.			<b>Sources of Impairment:</b>		
Causes of Impairment:					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH22 6.2</b>	<b>17-284</b>	<b>1.11</b>	<b>0.00</b>	County:	<b>MUSKINGUM CO</b>
WB Name: <b>TRIB. TO BIG RUN (RM 2.63)</b>				USEPA Reach Code:	<b>05040006-</b>
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>1.11</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9509 to 9509</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>1.11</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>1.1</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Macroinvertebrate sampling indicated good biological quality reflective of good water quality. Taxa collected suggest Coldwater Habitat (CWH). It is recommended that this high-gradient, extensively forested segment be designated CWH.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH23 1</b>	<b>17-940</b>	<b>27.10</b>	<b>0.00</b>	County:	
WB Name: <b>SALT CREEK</b>				USEPA Reach Code:	<b>05040004-</b>
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>27.10</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9608 to 9608</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>12.65</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>14.45</b>	
Narrative Assessment:	Excellent: <b>12.6</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The fish community was well within the exceptional range (IBI=56) at river mile 23.3. This segment is currently designated Warmwater Habitat. Future monitoring of more sites on the mainstem is recommended to assess the biological quality, and possibly upgrade the use designation to Exceptional Warmwater Habitat.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>EOLP</b>
<b>OH23 27</b>	<b>17-310</b>	<b>26.10</b>	<b>4.90</b>	County:	
WB Name: <b>JONATHAN CREEK (HEADWATERS TO BUCKEYE FORK)</b>				USEPA Reach Code:	<b>05040004-</b>
Aquatic Life Use(s): <b>EWH, LWH</b>		Segment Length: <b>21.20</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9509 to 9509</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>21.20</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>21.2</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The fish community scored in the exceptional range.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH25 1</b>	<b>01-001</b>	<b>81.62</b>	<b>73.40</b>	County: <b>HOCKING CO</b>	
WB Name: <b>HOCKING RIVER (RUSH CREEK TO CLEAR CREEK)</b>				USEPA Reach Code: <b>05030204-027</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>8.22</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>8.22</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>8.2</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment has fully recovered from degraded conditions documented in the early 1980's. Fish and macroinvertebrates were characterized by very good to exceptional communities.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH25 4</b>	<b>01-400</b>	<b>24.00</b>	<b>0.00</b>	County: <b>FAIRFIELD CO</b>	
WB Name: <b>CLEAR CREEK</b>				USEPA Reach Code: <b>05030204-045</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>24.00</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>10.40</b>	Full, But Threatened: <b>5.90</b>	Partial: <b>0.00</b>	None: <b>7.70</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>9.5</b>	Good: <b>6.8</b>	Fair: <b>7.7</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Despite the high quality conditions that characterize much of Clear Creek, the eroding and unstable upland areas pose a serious threat to existing conditions. Sediment bedload from the eroding uplands appear to have a significant impact on the downstream habitat quality of the forested, unglaciated segment. Although this reach still retains many positive habitat features, sediment transport will eventually degrade habitat quality. Future impairment may result from this process.					
<b>Causes of Impairment:</b>			<b>Sources of Impairment:</b>		
Flow alteration - H			Natural - H		
Other habitat alterations - S			Channelization - M		
Siltation - M			Agriculture - M		
Siltation - T			Removal of riparian vegetation - T		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH25 4.1</b>	<b>01-401</b>	<b>5.20</b>	<b>0.00</b>	County: <b>FAIRFIELD CO</b>	
WB Name: <b>DACE DITCH (AMANDA)</b>				USEPA Reach Code: <b>05030204-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>5.20</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>5.20</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.2</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Very good to exceptional biological conditions have been documented in this stream since 1987. The Fairfield County landfill apparently has little instream effect.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH25 4.4</b>	<b>01-451</b>	<b>2.52</b>	<b>0.00</b>	County: <b>FAIRFIELD CO</b>	
WB Name: <b>SAND RUN</b>				USEPA Reach Code: <b>05030204-</b>	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>2.52</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>2.52</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>2.5</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream was in full attainment of Warmwater Habitat criteria.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH25 5</b>	<b>01-410</b>	<b>8.20</b>	<b>0.00</b>	County: <b>FAIRFIELD CO</b>	
WB Name: <b>ARNEY RUN</b>				USEPA Reach Code: <b>05030204-044</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>8.20</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>5.20</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>3.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.2</b>	Fair: <b>3.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Modest impairment was observed downstream from the Southeast Ohio Correctional Facility WWTP, due to organic and nutrient enrichment. Partial attainment was a result of the macroinvertebrate community falling below Warmwater Habitat criteria.					
Causes of Impairment:			Sources of Impairment:		
Organic enrichment/DO - M			Minor Municipal Point Source - H		
Nutrients - M					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH25 7</b>	<b>01-420</b>	<b>7.20</b>	<b>0.00</b>	County: <b>FAIRFIELD CO</b>	
WB Name: <b>MUDDY PRAIRIE RUN</b>				USEPA Reach Code: <b>05030204-064</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>7.20</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>7.20</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>7.2</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> One site sampled near the mouth supported an exceptional biological community.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH25 8</b>	<b>01-430</b>	<b>2.81</b>	<b>0.00</b>	County: <b>FAIRFIELD CO</b>	
WB Name: <b>DUNKLE RUN</b>				USEPA Reach Code: <b>05030204-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>2.81</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>2.81</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>2.8</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> One site sampled near the mouth had biological communities in the very good to exceptional range.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH25 9</b>	<b>01-450</b>	<b>3.40</b>	<b>0.00</b>	County: <b>FAIRFIELD CO</b>	
WB Name: <b>MUDDY PRAIRIE CREEK</b>				USEPA Reach Code: <b>05030204-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>3.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>3.40</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>3.4</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is impaired due to channelization, heavy siltation and nutrient enrichment, all related to agricultural land use.					

Causes of Impairment: Nutrients - H

Sources of Impairment: Channelization - M  
Agriculture - H

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH25 23</b>	<b>01-001</b>	<b>101.59</b>	<b>81.62</b>	County: <b>FAIRFIELD CO</b>	
WB Name: <b>HOCKING RIVER (HEADWATERS TO RUSH CREEK)</b>				USEPA Reach Code: <b>05030204-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>19.97</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9506 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>8.66</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>7.04</b>
				None:	<b>2.90</b>
					Not Assessed: <b>1.37</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>8.6</b>	Fair: <b>7.0</b>	Poor: <b>0.0</b>	Very Poor: <b>2.9</b>
<p><b>Comments:</b> This reach consists of two distinctly different segments. The headwaters (upstream from Lancaster) are affected by channelization, sedimentation and nutrient enrichment. All of these are related to agricultural land use. Downstream from the Lancaster WWTP the impacts are from organic enrichment. Despite the modest impacts documented in 1995, the environmental conditions of the Hocking River from Lancaster to points downstream have demonstrated remarkable improvement. Recent upgrades to the Lancaster WWTP, along with pre-treatment programs, have been largely successful.</p> <p>Causes of Impairment:</p> <p>Siltation - H Other habitat alterations - M Nutrients - S Organic enrichment/DO - H</p> <p>Sources of Impairment:</p> <p>Channelization - H Major Municipal Point Source - H Agriculture - M</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH25 25</b>	<b>01-046</b>	<b>4.60</b>	<b>0.00</b>	County: <b>FAIRFIELD CO</b>	
WB Name: <b>BALDWIN RUN</b>				USEPA Reach Code: <b>05030204-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>4.60</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9506 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>2.40</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.20</b>
				None:	<b>0.10</b>
					Not Assessed: <b>1.90</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>2.4</b>	Fair: <b>0.2</b>	Poor: <b>0.1</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> Impairment in the lower 0.3 miles of the stream was attributed to frequent bypassing of raw sewage, and a temporary groundwater discharge from construction activities at the Lancaster WWTP. Sites upstream from the CSOs did not show impairment. Although the lower section is still impacted, significant improvement was noted compared to sampling done in previous years.</p> <p>Causes of Impairment:</p> <p>Organic enrichment/DO - H Thermal modifications - M</p> <p>Sources of Impairment:</p> <p>Combined Sewer Overflow - H Groundwater Loadings - H</p>					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH25 27</b>	<b>01-048</b>	<b>7.50</b>	<b>0.00</b>	County: <b>FAIRFIELD CO</b>	
WB Name: <b>HUNTERS RUN</b>				USEPA Reach Code: <b>05030204-042</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>7.50</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>7.50</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>2.5</b>	Good: <b>5.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This entire segment was in full attainment of Warmwater Habitat criteria. The lower 5 miles have been monitored since the early 1980's, and have shown considerable improvement. In 1995 the sampling coverage was extended further upstream to evaluate the effect of the Lancaster Landfill. No impact was evident.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH26 3</b>	<b>01-025</b>	<b>6.30</b>	<b>0.00</b>	County: <b>ATHENS CO</b>	
WB Name: <b>FACTORY CREEK</b>				USEPA Reach Code: <b>05030204-047</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>6.30</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9507</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>6.30</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>6.3</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The fish community scored moderately below Warmwater Habitat criteria (IBI=36). Slight effects of acid mine drainage were observed.					
Causes of Impairment:			Sources of Impairment:		
Siltation - T			Mine tailings - T		
Metals - T			Onsite wastewater systems (septic tanks) - T		
Nutrients - T			T		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH26 25.1</b>	<b>01-301</b>	<b>4.05</b>	<b>0.00</b>	County: <b>PERRY CO</b>	
WB Name: <b>TRIB. TO MONDAY CREEK (RM 19.73)</b>				USEPA Reach Code: <b>05030204-</b>	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>4.05</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9509 to 9509</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>4.05</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>4.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is currently undesignated. Based on fish and chemical results it is recommended that this segment be designated Warmwater Habitat.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH26 28</b>	<b>01-312</b>	<b>4.70</b>	<b>0.00</b>	County:	
WB Name: <b>SYCAMORE FORK</b>				USEPA Reach Code: <b>05030204-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>4.70</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9605</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>4.70</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>4.7</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: This segment is in the near vicinity of coal mines. The fish community does not meet Warmwater Habitat criteria. Low flow and sand deposition may be contributing factors. Data used in this analysis were collected by a graduate student from Ohio University. Many details about habitat and fish are missing.			Sources of Impairment:		
Causes of Impairment:					
Flow alteration - H		Natural - M			
Siltation - M		Surface Mining - H			

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH26 30</b>	<b>01-320</b>	<b>3.10</b>	<b>0.00</b>	County: <b>HOCKING CO</b>	
WB Name: <b>SAND RUN</b>				USEPA Reach Code: <b>05030204-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>3.10</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9605</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>3.10</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>3.1</b>	Very Poor: <b>0.0</b>
Comments: This stream is in the near vicinity of coal mines. The fish community fell short of Warmwater Habitat criteria. Low flow and sand deposition may be contributing factors. Data used in this analysis were collected by a graduate student from Ohio University. Many details about habitat and fish are missing.			Sources of Impairment:		
Causes of Impairment:					
Flow alteration - H		Natural - H			
Siltation - M		Surface Mining - H			

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH26 32</b>	<b>01-340</b>	<b>14.30</b>	<b>0.00</b>	County:	
WB Name: <b>LITTLE MONDAY CREEK</b>				USEPA Reach Code: <b>05030204-021</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>14.30</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9509 to 9509</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>14.30</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>10.7</b>	Poor: <b>3.6</b>	Very Poor: <b>0.0</b>
Comments: Mining within the basin has had a negative affect on this segment.			Sources of Impairment:		
Causes of Impairment:					
Siltation - H		Agriculture - M			
Salinity/TDS/chlorides - M		Surface Mining - H			

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH26 32.1</b>	<b>01-341</b>	<b>3.60</b>	<b>0.00</b>	County:	<b>PERRY CO</b>
WB Name: <b>TEMPERANCE HOLLOW CREEK</b>				USEPA Reach Code:	<b>05030204-</b>
Aquatic Life Use(s):	<b>NONE</b>	Segment Length:	<b>3.60</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9509 to 9509</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>3.60</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>3.6</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is currently undesignated, but clearly falls within the Warmwater Habitat range (IBI=44).					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH26 38</b>	<b>01-032</b>	<b>2.80</b>	<b>0.00</b>	County:	<b>ATHENS CO</b>
WB Name: <b>DORR RUN</b>				USEPA Reach Code:	<b>05030204-</b>
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>2.80</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9508 to 9508</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>2.80</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>2.8</b>
<b>Comments:</b> This stream is severely impacted by acid mine drainage. Causes of Impairment: pH - H Metals - H Salinity/TDS/chlorides - H Sources of Impairment: Acid Mine Drainage - H					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH26 43</b>	<b>01-037</b>	<b>9.50</b>	<b>0.00</b>	County:	<b>HOCKING CO</b>
WB Name: <b>SCOTT CREEK</b>				USEPA Reach Code:	<b>05030204-026</b>
Aquatic Life Use(s):	<b>WWH, EWH</b>	Segment Length:	<b>9.50</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9506 to 9510</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>1.50</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>7.50</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.50</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>1.5</b>	Fair: <b>7.5</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The biological communities in the middle and upper reaches appeared to be most influenced by habitat condition, effects from previous channelization, sedimentation, and natural low flow conditions. The Exceptional Warmwater Habitat (EWH) designation was changed to Warmwater Habitat (WWH) in the lower segment. Biological communities were more reflective of WWH. Causes of Impairment: Flow alteration - H Siltation - M Sources of Impairment: Channelization - M Agriculture - M Animal holding/management areas - M Mining - S Natural - H					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH26 47</b>	<b>01-001</b>	<b>73.40</b>	<b>68.96</b>	
WB Name: <i>HOCKING RIVER (ENTERPRISE TO SCOTT CREEK)</i>				Ecoregion: <b>WAP</b> County: <b>HOCKING CO</b> USEPA Reach Code: <b>05030204-</b>
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>4.44</b>		
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Assessment Age: <b>Current</b>		
Aquatic Life Use Attainment:				
Full: <b>4.40</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.04</b>
Narrative Assessment:	Excellent: <b>4.4</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>
				Very Poor: <b>0.0</b>
<b>Comments:</b> This segment has fully recovered from degraded conditions documented in the early 1980's. Fish and macroinvertebrates were characterized by very good to exceptional communities.				

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH27 4</b>	<b>01-010</b>	<b>4.50</b>	<b>0.00</b>	
WB Name: <i>FOURMILE CREEK</i>				Ecoregion: <b>WAP</b> County: <b>ATHENS CO</b> USEPA Reach Code: <b>05030204-055</b>
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>4.50</b>		
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9604 to 9604</b>	Assessment Age: <b>Current</b>		
Aquatic Life Use Attainment:				
Full: <b>1.50</b>	Full, But Threatened: <b>3.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>1.5</b>	Good: <b>3.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>
				Very Poor: <b>0.0</b>
<b>Comments:</b> This segment is currently meeting Exceptional Warmwater Habitat criteria (IBI=56), but is threatened by proposed major road construction. Habitat destruction caused by re-routing of the stream will most definitely cause impairment to the biological communities.				
Causes of Impairment:			Sources of Impairment:	
Other habitat alterations - T			Highway/road/bridge/sewer line - T	

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH27 10</b>	<b>01-006</b>	<b>5.10</b>	<b>0.00</b>	
WB Name: <i>JORDAN RUN</i>				Ecoregion: <b>WAP</b> County: <b>ATHENS CO</b> USEPA Reach Code: <b>05030204-</b>
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>5.10</b>		
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9507</b>	Assessment Age: <b>Current</b>		
Aquatic Life Use Attainment:				
Full: <b>5.10</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>5.1</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>
				Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is currently designated Warmwater Habitat (WWH). In 1995 the fish community scored in the Exceptional Warmwater Habitat (EWH) range. This segment should be re-designated EWH based on the fish and habitat scores.				

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH27 15</b>	<b>01-110</b>	<b>3.90</b>	<b>0.00</b>	County:	<b>ATHENS CO</b>
WB Name: <b>SHARPS RUN</b>				USEPA Reach Code:	<b>05030204-</b>
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>3.90</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9507</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>3.90</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>3.9</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is currently designated Limited Resource Water (LRW). The fish community clearly scored in the Exceptional Warmwater Habitat (EWH) range. This segment should be re-designated EWH.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH27 17</b>	<b>01-130</b>	<b>6.40</b>	<b>0.00</b>	County:	<b>WASHINGTON CO</b>
WB Name: <b>BIG RUN</b>				USEPA Reach Code:	<b>05030204-050</b>
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>6.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9508 to 9508</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>6.40</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>6.4</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is currently designated Limited Resource Water (LRW), but is clearly scoring at or near the range of Exceptional Warmwater Habitat (EWH). This segment should be re-designated EWH.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH27 18</b>	<b>01-132</b>	<b>2.10</b>	<b>0.00</b>	County:	<b>WASHINGTON CO</b>
WB Name: <b>JOES RUN</b>				USEPA Reach Code:	<b>05030204-</b>
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>2.10</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9507</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>2.10</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>2.1</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is currently designated Limited Resource Water (LRW). The fish community clearly scores in the Exceptional Warmwater Habitat (EWH) range. This segment should be re-designated EWH.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH27 19</b>	<b>01-131</b>	<b>0.60</b>	<b>0.00</b>	County: <b>WASHINGTON CO</b>	
WB Name: <b>NELLIS RUN</b>				USEPA Reach Code: <b>05030204-</b>	
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>0.60</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9507</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.60</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment: <b>0.6</b>	Excellent: <b>0.6</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is currently designated Limited Resource Water (LRW). The fish community is well within the Exceptional Warmwater Habitat (EWH) range (IBI=54). This segment should be re-designated EWH.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH27 20</b>	<b>01-133</b>	<b>2.40</b>	<b>0.00</b>	County: <b>WASHINGTON CO</b>	
WB Name: <b>WILDCAT RUN</b>				USEPA Reach Code: <b>05030204-</b>	
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>2.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9508 to 9508</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>2.40</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment: <b>2.4</b>	Excellent: <b>2.4</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is currently designated Limited Resource Water, but fish results indicate a community which is close to exceptional. Upgrading to Warmwater Habitat or Exceptional Warmwater Habitat is recommended.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH27 21</b>	<b>01-140</b>	<b>2.60</b>	<b>0.00</b>	County:	
WB Name: <b>SPRING RUN</b>				USEPA Reach Code: <b>05030204-</b>	
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>2.60</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9507</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>2.60</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment: <b>2.6</b>	Excellent: <b>2.6</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is currently designated Limited Resource Water (LRW). The fish community is well within the Exceptional Warmwater Habitat (EWH) range (IBI=56). This segment should be re-designated EWH.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH27 22</b>	<b>01-150</b>	<b>6.10</b>	<b>0.00</b>	County: <b>ATHENS CO</b>	
WB Name: <b>MARIETTA RUN</b>				USEPA Reach Code: <b>05030204-063</b>	
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>6.10</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9507</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>6.10</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>6.1</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The fish community in this segment is well above Warmwater Habitat criteria (IBI=48), and almost into the exceptional range.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH27 23</b>	<b>01-151</b>	<b>3.00</b>	<b>0.00</b>	County:	
WB Name: <b>BRILL RUN</b>				USEPA Reach Code: <b>05030204-</b>	
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>3.00</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9507</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>3.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>3.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The fish community in this stream clearly meets Exceptional Warmwater Habitat criteria (IBI=56). Habitat was also excellent (QHEI=79.5).					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH27 41</b>	<b>01-015</b>	<b>2.40</b>	<b>0.00</b>	County: <b>ATHENS CO</b>	
WB Name: <b>MILLER RUN</b>				USEPA Reach Code: <b>05030204-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>2.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9508 to 9512</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>2.40</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>2.4</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream was a sampled as a control stream for sites in the vicinity which are impacted by coal mining activities. Fish results from this natural stream indicate attainment of WWH criteria. Data were collected by an Ohio University graduate student.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:		
<b>OH28 9</b>	<b>09-071</b>	<b>5.00</b>	<b>0.00</b>		Ecoregion: <b>WAP</b>
WB Name: <b>DUNHAM RUN</b>					County: <b>MEIGS CO</b>
Aquatic Life Use(s): <b>WWH</b> Segment Length: <b>5.00</b>					USEPA Reach Code: <b>05030202-</b>
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9508 to 9508</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>3.50</b>	Full, But Threatened:	<b>1.50</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The proposed construction of U.S. Rt. 50 through Meigs County threatens the quality of this stream. Fish sampling done at river mile 1.5 was within non-significant departure of Warmwater Habitat criteria.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - T			Channelization - T		
Siltation - T			Highway/road/bridge/sewer line - T		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:		
<b>OH28 18</b>	<b>09-079</b>	<b>5.90</b>	<b>0.00</b>		Ecoregion: <b>WAP</b>
WB Name: <b>OLDTOWN CREEK</b>					County: <b>MEIGS CO</b>
Aquatic Life Use(s): <b>WWH</b> Segment Length: <b>5.90</b>					USEPA Reach Code: <b>05030202-075</b>
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9508 to 9508</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>4.20</b>	Full, But Threatened:	<b>1.70</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.9</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The proposed construction of U.S. Rt. 50 through Meigs County threatens the quality of this stream. Fish sampling done at river mile 1.7 attained Warmwater Habitat criteria.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - T			Highway/road/bridge/sewer line - T		
Siltation - T			Channelization - T		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:		
<b>OH28 33</b>	<b>09-610</b>	<b>21.90</b>	<b>0.00</b>		Ecoregion: <b>WAP</b>
WB Name: <b>EAST BRANCH SHADE RIVER</b>					County:
Aquatic Life Use(s): <b>EWH</b> Segment Length: <b>21.90</b>					USEPA Reach Code: <b>05030202-046</b>
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9610 to 9610</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>5.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>16.90</b>
Narrative Assessment:	Excellent: <b>5.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This is a high quality stream chosen as a comparison stream to stations in the Leading Creek basin, as part of the Meigs Mine #31 investigation.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH28 49</b>	<b>09-630</b>	<b>14.85</b>	<b>0.00</b>	County:	
WB Name: <i>MIDDLE BR. SHADE R. (PRATTS FK. TO W. BR. SHADE R)</i>					
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>14.85</b>		USEPA Reach Code: <b>05030202-048</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>5.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>5.00</b>	None: <b>0.00</b>	Not Assessed: <b>4.85</b>	
Narrative Assessment:	Excellent: <b>5.0</b>	Good: <b>5.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> This stream was sampled as reference conditions for sites on Leading Creek affected by the Meigs Mine #31 discharge. The downstream site was within non-significant departure of Exceptional Warmwater Habitat criteria. The upstream site did not attain EWH. There was insufficient data to do a full use attainability analysis.</p> <p>Causes of Impairment: Other habitat alterations - H Siltation - M</p> <p>Sources of Impairment: Agriculture - H</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH28 56</b>	<b>09-640</b>	<b>20.80</b>	<b>0.00</b>	County:	
WB Name: <i>WEST BRANCH SHADE RIVER</i>					
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>20.80</b>		USEPA Reach Code: <b>05030202-</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9607</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>4.00</b>	Not Assessed: <b>16.80</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>4.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> This stream was sampled as reference conditions to the lower portion of Leading Creek, which was affected by the Meigs Mine #31 discharge. Excessive sedimentation from coal mining was present, with some additional inputs from agriculture.</p> <p>Causes of Impairment: Siltation - H</p> <p>Sources of Impairment: Surface Mining - H Agriculture - M</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH29 28</b>	<b>09-200</b>	<b>8.49</b>	<b>0.00</b>	County: <b>MEIGS CO</b>	
WB Name: <i>LEADING CREEK (LITTLE LEADING CREEK TO OHIO RIVER)</i>					
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>8.49</b>		USEPA Reach Code: <b>05030202-</b>	

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Assessment Cycle: **98**      Data Collection Period: **9506 to 9610**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>6.89</b>	None:	<b>1.60</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.0</b>	<b>0.0</b>	<b>6.8</b>	<b>1.6</b>	<b>0.0</b>				

**Comments:** Aquatic life in the lower portion of this segment (upstream from Thomas Fork) appears to be limited by extensive sedimentation from surface mining operations (most of them old abandoned mines). Thomas Fork, a tributary heavily impacted from acid mine drainage and which is devoid of aquatic life, enters at river mile 1.6 and affects the extreme lower portion of Leading Creek. The Meigs Mine #31 spill of 1993 is no longer considered a contributing factor to the observed impairment.

Causes of Impairment:

Sources of Impairment:

Siltation - H

Surface Mining - H

Other habitat alterations - M

Agriculture - S

Salinity/TDS/chlorides - S

Subsurface mining - S

Salinity/TDS/chlorides - M

pH - H

WBID #: **OH29 34**      River Code: **09-201**      Upper River Mile: **10.60**      Lower River Mile: **0.00**

WB Name: *LITTLE LEADING CREEK*

Aquatic Life Use(s): **WWH**      Segment Length: **10.60**

Ecoregion:	<b>WAP</b>
County:	<b>MEIGS CO</b>
USEPA Reach Code:	<b>05030202-054</b>

Assessment Cycle: **98**      Data Collection Period: **9506 to 9606**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>	None:	<b>2.00</b>	Not Assessed:	<b>8.60</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.0</b>	<b>0.0</b>	<b>2.0</b>	<b>0.0</b>	<b>0.0</b>				

**Comments:** This segment was sampled as part of the Meigs Mine #31 investigation. The stream is affected by sedimentation from abandoned coal mines. Other contributing factors are pasturing and agricultural activities, which encroach on the stream and deliver excess sand and other fine sediments. Sediments and sand have filled in the pools and the channel bottom.

Causes of Impairment:

Sources of Impairment:

Siltation - H

Surface Mining - H

Other habitat alterations - M

Pasture land - M

WBID #: **OH29 35**      River Code: **09-200**      Upper River Mile: **18.50**      Lower River Mile: **8.49**

WB Name: *LEADING CREEK (DEXTER RUN TO LITTLE LEADING CREEK)*

Aquatic Life Use(s): **WWH**      Segment Length: **10.01**

Ecoregion:	<b>WAP</b>
County:	<b>MEIGS CO</b>
USEPA Reach Code:	<b>05030202-</b>

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Assessment Cycle: **98**      Data Collection Period: **9506 to 9710**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>10.01</b>	None:	<b>0.00</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>10.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>				

**Comments:** Fish in this segment met pre-Meigs Mine #31 discharge ecological endpoints as of 1997. The mine discharged highly acidic water in 1993 and wiped out the entire stream downstream from Parker Run. See previous assessments or the EPA fact sheets for a detailed description. The Macroinvertebrate communities seemed to have declined from 1996, possibly due to a slurry line break in Spring of 1997. Sedimentation from abandoned mines and agricultural livestock operations may be primary limiting factors in the upper portion of the watershed. The Leading Creek Improvement Council should begin to address some of the agricultural problems.

Causes of Impairment:

Sources of Impairment:

Salinity/TDS/chlorides - H  
Siltation - H

Agriculture - H  
Surface Mining - H  
Subsurface mining - H

WBID #: **OH29 36**      River Code: **09-202**      Upper River Mile: **3.40**      Lower River Mile: **0.00**

WB Name: **MALLOONS RUN**

Aquatic Life Use(s): **WWH**      Segment Length: **3.40**

Ecoregion:	<b>WAP</b>
County:	<b>MEIGS CO</b>
USEPA Reach Code:	<b>05030202-</b>

Assessment Cycle: **98**      Data Collection Period: **9505 to 9607**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>2.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>	None:	<b>0.00</b>	Not Assessed:	<b>1.40</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>2.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>				

**Comments:** This is a small tributary which is generally intact, and provides a good reference condition for small streams in the Leading Creek basin. Substrates are gravels, as opposed to sand and silt found in the mainstem of Leading Creek. A good population of salamanders was present. This segment easily attains Warmwater Habitat criteria for fish, even during periods of interstitial flow.

WBID #: **OH29 37**      River Code: **09-203**      Upper River Mile: **4.80**      Lower River Mile: **0.00**

WB Name: **PARKER RUN**

Aquatic Life Use(s): **WWH**      Segment Length: **4.80**

Ecoregion:	<b>WAP</b>
County:	<b>MEIGS CO</b>
USEPA Reach Code:	<b>05030202-076</b>

Assessment Cycle: **98**      Data Collection Period: **9505 to 9710**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>1.40</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>3.40</b>	None:	<b>0.00</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent: <b>1.4</b>	Good: <b>0.0</b>	Fair: <b>1.4</b>	Poor: <b>2.0</b>	Very Poor: <b>0.0</b>				

**Comments:** Fish sampling done in 1995-1997 showed gradually improving conditions. However, the macroinvertebrate conditions declined, possibly due to a slurry line break. There may also be effects related to the mine water treatment process that are preventing a more complete recovery of the stream. Plans for 1998 include letting beavers establish a flooded area to see if natural "wetland" treatment of the effluent can improve downstream conditions.

Causes of Impairment:

Sources of Impairment:

Salinity/TDS/chlorides - H  
Cause Unknown - H

Subsurface mining - H  
Hydromodification - M

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH29 37</b>	<b>09-203</b>	<b>4.80</b>	<b>0.00</b>	County: <b>MEIGS CO</b>	
WB Name: <b>PARKER RUN</b>				USEPA Reach Code: <b>05030202-076</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>4.80</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9505 to 9710</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>4.80</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Fish sampling done in 1995-1997 showed gradually improving conditions. However, the macroinvertebrate conditions declined, possibly due to a slurry line break. There may also be effects related to the mine water treatment process that are preventing a more complete recovery of the stream. Plans for 1998 include letting beavers establish a flooded area to see if natural "wetland" treatment of the effluent can improve downstream conditions.					

Hydromodification - H

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 1</b>	<b>09-510</b>	<b>12.57</b>	<b>0.00</b>	County:	
WB Name: <b>LITTLE RACCOON CREEK (DICKASON RUN TO RACCOON CR.)</b>				USEPA Reach Code: <b>05090101-033</b>	
Aquatic Life Use(s): <b>LRW</b>		Segment Length: <b>12.57</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>12.57</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>12.5</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment may have some impacts from acid mine drainage tributaries entering the mainstem in the segment upstream.					
Causes of Impairment:			Sources of Impairment:		
Other Metal - H Aluminum - M Iron - M			Acid Mine Drainage - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 7</b>	<b>09-510</b>	<b>28.89</b>	<b>12.57</b>	County:	
WB Name: <b>LITTLE RACCOON CREEK (SAND RUN TO DICKASON RUN)</b>				USEPA Reach Code: <b>05090101-034</b>	
Aquatic Life Use(s): <b>WWH, LRW</b>		Segment Length: <b>16.32</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>16.32</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>16.3</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Ammonia and BOD levels increased downstream from the confluence of Meadow Run. Several acid mine drainage tributaries flow into this section of Little Raccoon Creek, and may have some impacts on water quality.					
Causes of Impairment:			Sources of Impairment:		
Other Metal - H Aluminum - M Iron - M			Acid Mine Drainage - H Major Municipal Point Source - M Minor Industrial Point Source - M		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 7</b>	<b>09-510</b>	<b>28.89</b>	<b>12.57</b>	County:	
WB Name: <i>LITTLE RACCOON CREEK (SAND RUN TO DICKASON RUN)</i>					
Aquatic Life Use(s):	<b>WWH, LRW</b>	Segment Length:	<b>16.32</b>	USEPA Reach Code:	<b>05090101-034</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9506 to 9510</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed:
					<b>16.32</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Comments:</b> Ammonia and BOD levels increased downstream from the confluence of Meadow Run. Several acid mine drainage tributaries flow into this section of Little Raccoon Creek, and may have some impacts on water quality.					

Organic enrichment/DO - M

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 9</b>	<b>09-517</b>	<b>1.80</b>	<b>0.00</b>	County:	
WB Name: <i>GOOSE RUN</i>					
Aquatic Life Use(s):	<b>LWH</b>	Segment Length:	<b>1.80</b>	USEPA Reach Code:	<b>05090101-</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9506 to 9510</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>1.80</b>
					Not Assessed:
					<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.8</b>
<b>Comments:</b> This stream is highly impacted by acid mine drainage. No chemical data were collected in 1995, but instream sediments were stained orange, indicating mining effects. The fish and macroinvertebrate communities both scored in the poor range.					
Causes of Impairment:			Sources of Impairment:		
Metals - H pH - H			Acid Mine Drainage - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 10</b>	<b>09-518</b>	<b>2.60</b>	<b>0.00</b>	County:	
WB Name: <i>GREASY RUN</i>					
Aquatic Life Use(s):	<b>LWH</b>	Segment Length:	<b>2.60</b>	USEPA Reach Code:	<b>05090101-</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9506 to 9510</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>2.60</b>
				None:	<b>0.00</b>
					Not Assessed:
					<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>2.6</b>	<b>0.0</b>
<b>Comments:</b> This stream is highly impacted by acid mine drainage. No chemical data were collected in 1995, but instream sediments were stained orange, indicating mining effects. The fish community scored in the fair range, while the macroinvertebrate community scored in the poor range.					
Causes of Impairment:			Sources of Impairment:		
Metals - H pH - H			Acid Mine Drainage - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 11</b>	<b>09-519</b>	<b>2.40</b>	<b>0.00</b>	County:	
WB Name: <i>BUFFER RUN</i>				USEPA Reach Code: <b>05090101-</b>	
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>2.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.40</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>2.4</b>
<p><b>Comments:</b> Biological and chemical impairment due to acid mine drainage was evident. A gob pile adjacent to the stream was observed upstream from the sampling location. A substantial amount of coal fines were present in the stream substrates.</p> <p>Causes of Impairment:</p> <p>Metals - H Aluminum - H Iron - H Nickel - H pH - H</p> <p>Sources of Impairment: Acid Mine Drainage - H</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 12</b>	<b>09-520</b>	<b>2.20</b>	<b>0.00</b>	County:	
WB Name: <i>FLINT RUN</i>				USEPA Reach Code: <b>05090101-</b>	
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>2.20</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.20</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>2.2</b>
<p><b>Comments:</b> This stream is highly impacted by acid mine drainage. No chemical data were collected in 1995, but instream sediments were stained orange, indicating mining effects. The fish and macroinvertebrate communities both scored in the very poor range.</p> <p>Causes of Impairment:</p> <p>Metals - H pH - H</p> <p>Sources of Impairment: Acid Mine Drainage - H</p>					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 13</b>	<b>09-521</b>	<b>1.40</b>	<b>0.00</b>	County:	
WB Name: <b>COAL RUN</b>				USEPA Reach Code:	<b>05090101-</b>
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>1.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>1.40</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>1.4</b>	Very Poor: <b>0.0</b>
Comments: Acid mine drainage impacts were noted in this stream, but the severity was not as much as in other streams in the area which flow into Little Raccoon Creek.			Sources of Impairment:		
Causes of Impairment: Iron - M Other Metal - M			Acid Mine Drainage - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 14</b>	<b>09-522</b>	<b>4.00</b>	<b>0.00</b>	County:	
WB Name: <b>RICH RUN</b>				USEPA Reach Code:	<b>05090101-</b>
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>4.00</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>4.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>4.0</b>	Very Poor: <b>0.0</b>
Comments: This stream is impacted by acid mine drainage. High levels of aluminum and manganese were documented. Low pH (4.65) was also present. The fish and macroinvertebrate communities both scored in the very poor range.			Sources of Impairment:		
Causes of Impairment: Aluminum - H Other Metal - H pH - H			Acid Mine Drainage - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 16</b>	<b>09-524</b>	<b>5.10</b>	<b>0.00</b>	County:	<b>JACKSON CO</b>
WB Name: <b>MEADOW RUN</b>				USEPA Reach Code:	<b>05090101-</b>
Aquatic Life Use(s): <b>LRW, WWH</b>		Segment Length: <b>5.10</b>			

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Assessment Cycle: **98**      Data Collection Period: **9506 to 9510**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>	None:	<b>5.10</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.0</b>	<b>0.0</b>	<b>0.9</b>	<b>4.2</b>	<b>0.0</b>				

**Comments:** Impacts from acid mine drainage in the upper portion of this segment appear to be less than in previous years. High levels of manganese were recorded in the water column and sediments in Wellston. The lower 1.2 miles (near the Wellston WWTP and the Pillsbury Co. outfalls) are heavily impacted by organic wastes and low dissolved oxygen. At river mile 0.8, the macroinvertebrate community scored in the very poor range in all 3 surveys done from 1984 to 1995.

Causes of Impairment:

Organic enrichment/DO - H  
 Priority organics - M  
 Metals - M

Sources of Impairment:

Major Municipal Point Source - H  
 Minor Industrial Point Source - H  
 Acid Mine Drainage - M

WBID #: **OH30 22**      River Code: **09-500**      Upper River Mile: **47.67**      Lower River Mile: **37.55**

WB Name: **RACCOON CREEK (FLATLICK RUN TO LITTLE RACCOON CR.)**

Aquatic Life Use(s): **WWH**      Segment Length: **10.12**

Ecoregion:	<b>WAP</b>
County:	
USEPA Reach Code:	<b>05090101-</b>

Assessment Cycle: **98**      Data Collection Period: **9506 to 9510**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>10.12</b>	None:	<b>0.00</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.0</b>	<b>0.0</b>	<b>10.1</b>	<b>0.0</b>	<b>0.0</b>				

**Comments:** This segment appears to receive periodic pulses of acid mine drainage from Pierce Run and Karr Run. High rainfall and high water years have been shown to correlate with a decline in biological index scores.

Causes of Impairment:

Metals - H

Sources of Impairment:

Acid Mine Drainage - H

WBID #: **OH30 23**      River Code: **09-544**      Upper River Mile: **2.90**      Lower River Mile: **0.00**

WB Name: **ROBINSON RUN**

Aquatic Life Use(s): **WWH**      Segment Length: **2.90**

Ecoregion:	<b>WAP</b>
County:	
USEPA Reach Code:	<b>05090101-</b>

Assessment Cycle: **98**      Data Collection Period: **9606 to 9710**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>2.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.50</b>	None:	<b>0.00</b>	Not Assessed:	<b>0.40</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.0</b>	<b>2.0</b>	<b>0.5</b>	<b>0.0</b>	<b>0.0</b>				

**Comments:** This stream has recovered from the effects of the Meigs Mine #31 discharge in 1993. Limitations in the stream are largely natural (small size in headwaters, and periodic impounding from Raccoon Creek near the mouth). There is a significant amount of sedimentation from agriculture which may have effects near the mouth.

Causes of Impairment:

Natural Limits (Wetlands) - H  
 Siltation - S

Sources of Impairment:

Natural - H  
 Agriculture - S

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 24</b>	<b>09-545</b>	<b>3.10</b>	<b>0.00</b>	County:	
WB Name: <b>SUGAR RUN</b>				USEPA Reach Code:	<b>05090101-</b>
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>3.10</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9605 to 9710</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>1.50</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>1.60</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>1.5</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream has recovered from the effects of the Meigs Mine #31 discharge in 1993. Sensitive species have returned including southern redbelly dace and large populations of least brook lamprey.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 25</b>	<b>09-546</b>	<b>10.40</b>	<b>0.00</b>	County:	
WB Name: <b>STRONGS RUN</b>				USEPA Reach Code:	<b>05090101-023</b>
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>10.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9605 to 9710</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>4.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>6.40</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>4.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment has recovered from the effects of the Meigs Mine #31 discharge in 1993. Results from 1997 were the best since prior to the discharge. Macroinvertebrates scored well into the exceptional range (ICI=54) at river mile 1.5. The fish community was comprised of 22 species, including one of the largest collections of least brook lamprey in any stream in Ohio. This species was totally eliminated in 1993.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 27</b>	<b>09-548</b>	<b>1.40</b>	<b>0.00</b>	County:	
WB Name: <b>OPOSSUM RUN</b>				USEPA Reach Code:	<b>05090101-</b>
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>1.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>1.40</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>1.4</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Although no visible signs of acid mine drainage were observed, other factors suggest its presence. Elevated levels of iron and manganese, with low pH values indicate a possible impact. Oil was observed on the surface of the water, and silted substrates were present. The macroinvertebrate community scored in the fair range. It is recommended that this segment be upgraded to the use designation Warmwater Habitat.					
<b>Causes of Impairment:</b>			<b>Sources of Impairment:</b>		
pH - M Iron - H Other Metal - H			Source Unknown - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 27</b>	<b>09-548</b>	<b>1.40</b>	<b>0.00</b>	County:	
WB Name: <i>OPOSSUM RUN</i>				USEPA Reach Code: <b>05090101-</b>	
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>1.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>1.40</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> Although no visible signs of acid mine drainage were observed, other factors suggest its presence. Elevated levels of iron and manganese, with low pH values indicate a possible impact. Oil was observed on the surface of the water, and silted substrates were present. The macroinvertebrate community scored in the fair range. It is recommended that this segment be upgraded to the use designation Warmwater Habitat.</p> <p>Siltation - H Oil and grease - S</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 28</b>	<b>09-500</b>	<b>66.64</b>	<b>47.67</b>	County:	
WB Name: <i>RACCOON CREEK (ELK FORK TO FLATLICK RUN)</i>				USEPA Reach Code: <b>05090101-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>18.97</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>5.94</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>12.79</b>	None: <b>0.00</b>	Not Assessed: <b>0.24</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.9</b>	Fair: <b>12.7</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> This segment appears to receive periodic pulses of acid mine drainage from Pierce Run and Karr Run. High rainfall and high water years have been shown to correlate with a decline in biological index scores.</p> <p>Causes of Impairment: Sources of Impairment:</p> <p>Metals - H Acid Mine Drainage - H</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 29</b>	<b>09-549</b>	<b>5.10</b>	<b>0.00</b>	County:	
WB Name: <i>FLATLICK RUN</i>				USEPA Reach Code: <b>05090101-069</b>	
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>5.10</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>4.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>1.10</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>4.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> This segment was sampled as a "control" stream or unimpacted reference stream for small tributaries in the Raccoon Creek basin impacted by the Meigs Mine #31 discharge. The stream has met WWH criteria throughout the period of the 1990's. Potential stressors in the watershed include livestock impacts.</p>					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 30</b>	<b>09-550</b>	<b>1.20</b>	<b>0.00</b>	County:	
WB Name: <i>KARR RUN</i>				USEPA Reach Code: <b>05090101-</b>	
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>1.20</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>1.20</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>1.2</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is impacted by acid mine drainage. No chemical data were collected in 1995, but instream substrates were stained orange, indicating mining effects. The fish community scored in the fair range, while the macroinvertebrate community scored in the poor range.					

pH - H  
Metals - H

Acid Mine Drainage - H

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 31</b>	<b>09-551</b>	<b>2.40</b>	<b>0.00</b>	County:	
WB Name: <i>INDIANCAMP RUN</i>				USEPA Reach Code: <b>05090101-</b>	
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>2.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>2.40</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.4</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is impacted by acid mine drainage, but not as severe as other streams in the Raccoon Creek basin. Instream sediments were stained brownish-orange. The fish and macroinvertebrate communities both scored in the fair range.					

pH - S

Acid Mine Drainage - M

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 32</b>	<b>09-552</b>	<b>2.10</b>	<b>0.00</b>	County:	
WB Name: <i>ROCKCAMP RUN</i>				USEPA Reach Code: <b>05090101-</b>	
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>2.10</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.10</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>2.1</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is impacted by acid mine drainage. Instream substrates were stained orange, and manganese and sulfate levels in the water column were elevated. The fish and macroinvertebrate communities both scored in the poor range.					

Other Metal - M

Acid Mine Drainage - H

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 33</b>	<b>09-553</b>	<b>8.50</b>	<b>0.00</b>	County:	
WB Name: <b>PIERCE RUN</b>					
Aquatic Life Use(s):	<b>LWH</b>	Segment Length:	<b>8.50</b>	USEPA Reach Code:	<b>05090101-</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9506 to 9510</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>8.50</b>
				None:	<b>0.00</b>
					Not Assessed:
					<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>8.5</b>	<b>0.0</b>
Comments: This stream is impacted by acid mine drainage. Sediments were stained orange, water column metals and sulfates were elevated, and the pH was low. The fish community scored in the fair range, while the macroinvertebrates were poor.					
Causes of Impairment:			Sources of Impairment:		
pH - H			Acid Mine Drainage - H		
Iron - H					
Zinc - H					
Other Metal - H					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 34</b>	<b>09-554</b>	<b>2.60</b>	<b>0.00</b>	County:	
WB Name: <b>ZINNS RUN</b>					
Aquatic Life Use(s):	<b>LWH</b>	Segment Length:	<b>2.60</b>	USEPA Reach Code:	<b>05090101-</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9506 to 9510</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>2.60</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed:
					<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>2.6</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Comments: Although a few chemical parameters (pH, aluminum, iron, manganese) were outside of the ranges expected for the ecoregion, the substrates were not characteristic of streams affected by acid mine drainage. The fish and macroinvertebrate communities both scored in the good range.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 35</b>	<b>09-530</b>	<b>18.60</b>	<b>0.00</b>	County:	<b>VINTON CO</b>
WB Name: <b>ELK FORK</b>					
Aquatic Life Use(s):	<b>WWH, LRW</b>	Segment Length:	<b>18.60</b>	USEPA Reach Code:	<b>05090101-032</b>

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Assessment Cycle: **98**      Data Collection Period: **9506 to 9510**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>4.00</b>	Full, But Threatened:	<b>0.00</b>	<b>Partial:</b>	<b>14.60</b>	<b>None:</b>	<b>0.00</b>	<b>Not Assessed:</b>	<b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>4.0</b>	Fair: <b>14.6</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>				

**Comments:** The segment upstream from the confluence of Puncheon Fork was in partial attainment of WWH criteria. Some acid mine drainage effects were noted (high levels of iron, manganese and zinc). Downstream from Puncheon Fork ammonia and BOD levels were elevated due to the McArthur WWTP. Siltation downstream from Puncheon Fork affected the macroinvertebrate community. Although Austin Powder Co.'s main effluent no longer discharges to a small tributary to Elk Fork, elevated nitrate levels were recorded downstream from the tributary.

- |  |  |
|--|--|
| Causes of Impairment:<br>Zinc - H<br>Iron - H<br>Other Metal - H<br>Siltation - H<br>Cause Unknown - M | Sources of Impairment:<br>Acid Mine Drainage - H<br>Mining - H<br>Source Unknown - M |
|--|--|

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH30 39</b>	<b>09-534</b>	<b>5.60</b>	<b>0.00</b>	Ecoregion: <b>WAP</b> County: <b>VINTON CO</b> USEPA Reach Code: <b>05090101-083</b>
WB Name: <b>PUNCHEON FORK</b>				
Aquatic Life Use(s): <b>LRW</b>		Segment Length: <b>5.60</b>		

Assessment Cycle: **98**      Data Collection Period: **9506 to 9510**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>5.60</b>	Full, But Threatened:	<b>0.00</b>	<b>Partial:</b>	<b>0.00</b>	<b>None:</b>	<b>0.00</b>	<b>Not Assessed:</b>	<b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.6</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>				

**Comments:** The fish and macroinvertebrate communities scored well at sites upstream from the McArthur WWTP. Slight declines in the biological communities were noted downstream from the WWTP. Ammonia and nitrate levels increased downstream from the WWTP. There is no indication of acid mine drainage impacts in Puncheon Fork.

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH30 40</b>	<b>09-578</b>	<b>2.95</b>	<b>0.00</b>	Ecoregion: <b>WAP</b> County: <b>VINTON CO</b> USEPA Reach Code: <b>05090101-</b>
WB Name: <b>AUSTIN POWDER TRIB.</b>				
Aquatic Life Use(s): <b>LRW</b>		Segment Length: <b>2.95</b>		

Assessment Cycle: **98**      Data Collection Period: **9506 to 9510**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	<b>Partial:</b>	<b>0.00</b>	<b>None:</b>	<b>2.95</b>	<b>Not Assessed:</b>	<b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.9</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>				

**Comments:** This stream used to receive the main effluent from Austin Powder Co., but the company moved the outfall to another small stream just to the north. Macroinvertebrate data was the only data collected in 1995. The community scored in the fair range. Nitrate levels on Elk Fork were elevated downstream from this tributary.

- |  |   |
|--|---|
| Causes of Impairment:<br>Nutrients - H | Sources of Impairment:<br>Minor Industrial Point Source - H |
|--|---|

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 41</b>	<b>09-500</b>	<b>89.54</b>	<b>66.64</b>	County:	
WB Name: <b>RACCOON CREEK (HEWETT FORK TO ELK FORK)</b>				USEPA Reach Code:	<b>05090101-</b>
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>22.90</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>11.66</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>11.24</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>11.6</b>	Fair: <b>11.2</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: The effects of acid mine drainage are less in this segment than in the reaches upstream. Fish and macroinvertebrate communities improved significantly, scoring in the fair to marginally good range, and even exceptional in places.			Sources of Impairment:		
Causes of Impairment: Zinc - H Other Metal - H			Acid Mine Drainage - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 43</b>	<b>09-556</b>	<b>3.80</b>	<b>0.00</b>	County:	
WB Name: <b>LONG RUN</b>				USEPA Reach Code:	<b>05090101-077</b>
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>3.80</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>3.80</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>3.8</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: There was no indication of impacts from acid mine drainage in this stream. Possible impacts may be from oil and gas operations in the basin. Fish and macroinvertebrate scores were both in the fair range.			Sources of Impairment:		
Causes of Impairment: Oil and grease - H Salinity/TDS/chlorides - H			Petroleum activities - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 44</b>	<b>09-557</b>	<b>7.30</b>	<b>0.00</b>	County:	
WB Name: <b>FLAT RUN</b>				USEPA Reach Code:	<b>05090101-</b>
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>7.30</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>7.30</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>7.3</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: There was no indication of impacts from acid mine drainage in this stream. Some impacts are possible from oil and gas operations in the basin. The fish community scored in the fair range.			Sources of Impairment:		
Causes of Impairment: Oil and grease - M Cause Unknown - H			Petroleum activities - M Source Unknown - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 45</b>	<b>09-558</b>	<b>3.00</b>	<b>0.00</b>	County:	
WB Name: <b>RUSSELL RUN</b>				USEPA Reach Code: <b>05090101-</b>	
Aquatic Life Use(s):	<b>LWH</b>	Segment Length:	<b>3.00</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9506 to 9510</b>	Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>3.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>3.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> There is no indication of impacts from acid mine drainage in this stream. Some impacts are possible from oil and gas operations in the basin. The fish community scored in the fair range.					
Causes of Impairment:			Sources of Impairment:		
Oil and grease - S			Petroleum activities - S		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 46</b>	<b>09-559</b>	<b>2.10</b>	<b>0.00</b>	County:	
WB Name: <b>MERRIT RUN</b>				USEPA Reach Code: <b>05090101-</b>	
Aquatic Life Use(s):	<b>LWH</b>	Segment Length:	<b>2.10</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9506 to 9510</b>	Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>2.10</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>2.1</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> There appear to be some impacts from acid mine drainage in this stream. Instream substrates were slightly stained orange, indicating effects of mining.					
Causes of Impairment:			Sources of Impairment:		
Cause Unknown - M			Acid Mine Drainage - H		
			Petroleum activities - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 47</b>	<b>09-560</b>	<b>2.50</b>	<b>0.00</b>	County:	
WB Name: <b>TEDROE RUN</b>				USEPA Reach Code: <b>05090101-</b>	
Aquatic Life Use(s):	<b>LWH</b>	Segment Length:	<b>2.50</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9506 to 9510</b>	Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>2.50</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.5</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Slight impacts from acid mine drainage were observed in this stream. Some areas had instream substrates stained orange. Elevated levels of manganese were present in the water column. The fish and macroinvertebrate communities both scored in the fair range.					
Causes of Impairment:			Sources of Impairment:		
Other Metal - M			Acid Mine Drainage - M		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 48</b>	<b>09-561</b>	<b>6.00</b>	<b>0.00</b>	County:	
WB Name: <b>ONION CREEK</b>				USEPA Reach Code:	<b>05090101-</b>
Aquatic Life Use(s):	<b>LWH</b>	Segment Length:	<b>6.00</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9506 to 9510</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>6.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>6.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: There is no indication of impacts from acid mine drainage in this stream. The fish community scored in the fair range, while the macroinvertebrates were in the very good range.			Sources of Impairment:		
Causes of Impairment:			Source Unknown - H		
Cause Unknown - H					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 49</b>	<b>09-562</b>	<b>3.30</b>	<b>0.00</b>	County:	
WB Name: <b>LAUREL RUN</b>				USEPA Reach Code:	<b>05090101-</b>
Aquatic Life Use(s):	<b>LWH</b>	Segment Length:	<b>3.30</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9506 to 9510</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>3.30</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>3.3</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: There is no indication of impacts from acid mine drainage in this stream. However, thick deposits of silt were present. The macroinvertebrate community was attaining Warmwater Habitat criteria.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 51</b>	<b>09-564</b>	<b>5.10</b>	<b>0.00</b>	County:	
WB Name: <b>ROCKCAMP CREEK</b>				USEPA Reach Code:	<b>05090101-085</b>
Aquatic Life Use(s):	<b>LWH</b>	Segment Length:	<b>5.10</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9506 to 9510</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>5.10</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>5.1</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: There is no indication of acid mine drainage impacts in this stream. It is recommended that the use designation be upgraded to Warmwater Habitat. The macroinvertebrate community scored only in the fair range, but this may have been due to low habitat diversity (no riffles in the sampling zone).			Sources of Impairment:		
Causes of Impairment:			Source Unknown - H		
Cause Unknown - H					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 52</b>	<b>09-565</b>	<b>1.60</b>	<b>0.00</b>	County:	
WB Name: <b>COAL RUN</b>				USEPA Reach Code:	<b>05090101-</b>
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>1.60</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>1.60</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>1.6</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: This stream appears to have some impacts from acid mine drainage. No chemical samples were collected in 1995, but instream sediments were slightly red, indicating mining effects. The fish and macroinvertebrate communities both scored in the fair range.			Sources of Impairment:		
Causes of Impairment: pH - H Metals - H			Acid Mine Drainage - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 53</b>	<b>09-566</b>	<b>2.10</b>	<b>0.00</b>	County:	
WB Name: <b>PINE RUN</b>				USEPA Reach Code:	<b>05090101-</b>
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>2.10</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.10</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>2.1</b>	Very Poor: <b>0.0</b>
Comments: This stream shows signs of impairment from acid mine drainage. No chemical data were collected in 1995, but instream sediments were stained orange, indicating mining effects. The macroinvertebrate community scored in the poor range.			Sources of Impairment:		
Causes of Impairment: pH - H Metals - H			Acid Mine Drainage - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH30 54</b>	<b>09-567</b>	<b>2.80</b>	<b>0.00</b>	County:	
WB Name: <b>GRASS RUN</b>				USEPA Reach Code:	<b>05090101-</b>
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>2.80</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>2.80</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.8</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: This segment was in partial attainment of Warmwater Habitat criteria. The fish community scored in the fair range. Macroinvertebrates scored in the good range. Manganese and iron were present in elevated levels in the water column.			Sources of Impairment:		
Causes of Impairment: Iron - H Other Metal - H			Source Unknown - M		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 55</b>	<b>09-500</b>	<b>103.06</b>	<b>89.54</b>	County:	
WB Name: <b>RACCOON CREEK (BRUSHY CREEK TO HEWETT FORK)</b>				USEPA Reach Code: <b>05090101-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>13.52</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>10.54</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>2.98</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.9</b>	Poor: <b>10.5</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> The upper reaches of Raccoon Creek are impaired chemically and biologically due to acid mine drainage entering from the East Branch. High levels of zinc and manganese were documented. The impairment in this segment is not as severe as in the upstream segment, but fish and macroinvertebrates were still in the poor and fair ranges. Water quality improves downstream from Sandy Run, but fish and macroinvertebrates were still below Warmwater Habitat criteria.</p> <p>Causes of Impairment: Zinc - H Other Metal - H</p> <p>Sources of Impairment: Acid Mine Drainage - H</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 55.1</b>	<b>09-589</b>	<b>2.32</b>	<b>0.00</b>	County: <b>VINTON CO</b>	
WB Name: <b>TRIB. TO RACCOON CREEK (RM 98.96)</b>				USEPA Reach Code: <b>05090101-</b>	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>2.32</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.32</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.3</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> The biological communities scored in the fair range, much of the reason being poor habitat. The macroinvertebrate sample was collected in a wetland environment. Austin Powder Co. has a discharge in the upper portion of this segment.</p> <p>Causes of Impairment: Other habitat alterations - H</p> <p>Sources of Impairment: Natural - H</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 59.1</b>	<b>09-590</b>	<b>4.85</b>	<b>0.00</b>	County:	
WB Name: <b>DUNKLE CREEK</b>				USEPA Reach Code:	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>4.85</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9608 to 9608</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>4.85</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>4.8</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> This stream is currently undesignated. The fish community scored below Warmwater Habitat criteria (IBI=34), but habitat is sufficient to support a WWH community (QHEI=64).</p> <p>Causes of Impairment: Siltation - H Other habitat alterations - M Metals - M</p> <p>Sources of Impairment: Surface Mining - H Agriculture - H</p>					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 59.1</b>	<b>09-590</b>	<b>4.85</b>	<b>0.00</b>	County:	
WB Name: <b>DUNKLE CREEK</b>				USEPA	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>4.85</b>		Reach Code:	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9608 to 9608</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>4.85</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is currently undesignated. The fish community scored below Warmwater Habitat criteria (IBI=34), but habitat is sufficient to support a WWH community (QHEI=64).					

pH - M

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 60</b>	<b>09-500</b>	<b>111.96</b>	<b>103.06</b>	County:	
WB Name: <b>RACCOON CREEK (EAST/WEST BRANCH TO BRUSHY FORK)</b>				USEPA	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>8.90</b>		Reach Code: <b>05090101-</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>8.90</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>8.9</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The upper reaches of Raccoon Creek are impaired biologically and chemically from acid mine drainage entering from the East Branch. High levels of aluminum, manganese and zinc, along with low pH values were documented. The fish and macroinvertebrate communities were both poor. This segment should be re-designated Limited Resource Water - Acid Mine Drainage.					
Causes of Impairment:			Sources of Impairment:		
Zinc - H			Acid Mine Drainage - H		
Aluminum - H					
Other Metal - H					
pH - H					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 62</b>	<b>09-573</b>	<b>4.30</b>	<b>0.00</b>	County:	
WB Name: <b>TWOMILE RUN</b>				USEPA Reach Code: <b>05090101-</b>	
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>4.30</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>4.30</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>4.3</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: This stream shows some signs of impairment due to acid mine drainage. Instream sediments were stained orange, and contained significant amounts of coal fines. High levels of manganese and sulfates were also recorded. The fish community scored in the fair range, while the macroinvertebrates scored in the good range.			Sources of Impairment:		
Causes of Impairment:			Sources of Impairment:		
Other Metal - M			Acid Mine Drainage - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 63</b>	<b>09-574</b>	<b>9.30</b>	<b>0.00</b>	County:	
WB Name: <b>EAST BRANCH RACCOON CREEK</b>				USEPA Reach Code: <b>05090101-029</b>	
Aquatic Life Use(s): <b>LRW</b>		Segment Length: <b>9.30</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>9.30</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>9.3</b>	Very Poor: <b>0.0</b>
Comments: This stream is severely degraded by acid mine drainage. The contamination continues from the East Branch into the upper Raccoon Creek mainstem, causing major impairment as far down as the confluence of Sandy Run.			Sources of Impairment:		
Causes of Impairment:			Sources of Impairment:		
Aluminum - H			Acid Mine Drainage - H		
Iron - H					
Other Metal - H					
Zinc - H					
pH - H					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH30 64</b>	<b>09-575</b>	<b>8.10</b>	<b>0.00</b>	County:	
WB Name: <i>WEST BRANCH RACCOON CREEK</i>				USEPA Reach Code: <b>05090101-030</b>	
Aquatic Life Use(s): <b>LWH</b>		Segment Length: <b>8.10</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>8.10</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>8.1</b>	Very Poor: <b>0.0</b>
Comments: This stream has slight impacts from acid mine drainage, but they are not nearly as severe as in the East Branch. The fish community scored in the poor range. Low flow conditions affected the macroinvertebrate community at the upper site sampled, but the community scored in the good range near the mouth.			Sources of Impairment:		
Causes of Impairment: Other Metal - H Zinc - H			Acid Mine Drainage - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH31 33</b>	<b>09-500</b>	<b>12.65</b>	<b>0.00</b>	County: <b>GALLIA CO</b>	
WB Name: <i>RACCOON CREEK (CLAYLICK RUN TO OHIO RIVER)</i>				USEPA Reach Code: <b>05090101-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>12.65</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>12.65</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>12.6</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: The lower portion of the Raccoon Creek mainstem appears to be unaffected by acid mine drainage impacts. However, during high rainfall and high flow events, there may be some effects from problems originating in the upper portion of the basin.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH31 49</b>	<b>09-500</b>	<b>37.55</b>	<b>27.83</b>	County: <b>GALLIA CO</b>	
WB Name: <i>RACCOON CREEK (LITTLE RACCOON CREEK TO RYAN RUN)</i>				USEPA Reach Code: <b>05090101-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>9.72</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>9.72</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>4.9</b>	Good: <b>4.8</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: The lower section of the Raccoon Creek mainstem appears to be unaffected by acid mine drainage impacts. However, this segment may be affected during high rainfall and high flow years from mining problems in the upper portion of the basin.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH31 50</b>	<b>09-539</b>	<b>9.10</b>	<b>0.00</b>	County:	
WB Name: <b>INDIAN CREEK</b>					
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>9.10</b>	USEPA Reach Code:	<b>05090101-</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9507 to 9508</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>9.10</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>9.1</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> There has been significant improvement in the water quality downstream from the Rio Grande WWTP since 1987. Sampling done in 1996 showed attainment of Warmwater Habitat criteria upstream from the WWTP, and very little effect immediately downstream. Historically, sites downstream from the WWTP had been in the poor range.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH32 35</b>	<b>09-730</b>	<b>16.05</b>	<b>0.00</b>	County:	
WB Name: <b>BLACK FORK</b>					
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>16.05</b>	USEPA Reach Code:	<b>05090101-</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9508 to 9509</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>16.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.05</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>16.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> One site was sampled in 1996 downstream from the confluence of Huntingcamp Creek. Dramatic improvement in the fish community at river mile 5.8 was noted compared to sampling done in 1987. IBI scores were near the exceptional range. Improvements may be related to better conditions in Huntingcamp Creek than historically recorded. Though notable impacts were observed in Oak Hill (IBI values in the poor and fair range), they were not nearly as severe as in 1987. The reduction of the toxic effects in Huntingcamp Creek has apparently carried over into better water quality conditions in Black Fork.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>WAP</b>
<b>OH32 40</b>	<b>09-735</b>	<b>3.40</b>	<b>0.00</b>	County:	
WB Name: <b>HUNTINGCAMP CREEK</b>					
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>3.40</b>	USEPA Reach Code:	<b>05090101-</b>

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Assessment Cycle: **98**      Data Collection Period: **9507 to 9509**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>	None:	<b>3.40</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>3.4</b>	Very Poor: <b>0.0</b>				

**Comments:** This segment is impacted by the Oak Hill WWTP. Sludge deposits were present in significant amounts in the stream channel. Oil and grease from a junk yard upstream adds to the water quality problems. Fish sampling scores were all below Warmwater Habitat criteria, falling into the fair and poor ranges.

Causes of Impairment:

Organic enrichment/DO - H  
 Nutrients - H  
 Oil and grease - M

Sources of Impairment:

Minor Municipal Point Source - H  
 Onsite wastewater systems (septic tanks) - H  
 Urban Runoff/Storm Sewers (NPS) - H  
 Sludge - H

WBID #: **OH33 38**      River Code: **09-300**      Upper River Mile: **35.10**      Lower River Mile: **24.12**

WB Name: *LITTLE SCIOTO RIVER (HEADWATERS TO HOLLAND FORK)*

Aquatic Life Use(s): **WWH**      Segment Length: **10.98**

Ecoregion:	<b>WAP</b>
County:	
USEPA Reach Code:	<b>05090103-</b>

Assessment Cycle: **98**      Data Collection Period: **9610 to 9610**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>6.00</b>	Full, But Threatened:	<b>4.98</b>	Partial:	<b>0.00</b>	None:	<b>0.00</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent: <b>10.9</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>				

**Comments:** Two sites were sampled in this segment as part of the Meigs Mine #31 investigation. Sites were used as reference conditions for the Leading Creek basin. Livestock activities are encroaching on the stream banks in the upper portion. Lots of stream litter was present at the downstream site. There is Exceptional Warmwater Habitat potential within this segment.

Causes of Impairment:

Siltation - T  
 Other habitat alterations - T

Sources of Impairment:

Pasture land - T

WBID #: **OH33 66**      River Code: **09-400**      Upper River Mile: **47.41**      Lower River Mile: **38.15**

WB Name: *PINE CREEK (HEADWATERS TO HALES CREEK)*

Aquatic Life Use(s): **WWH**      Segment Length: **9.26**

Ecoregion:	<b>WAP</b>
County:	
USEPA Reach Code:	<b>05090103-053</b>

Assessment Cycle: **98**      Data Collection Period: **9608 to 9610**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>1.41</b>	Full, But Threatened:	<b>1.60</b>	Partial:	<b>4.00</b>	None:	<b>2.40</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent: <b>1.4</b>	Good: <b>4.0</b>	Fair: <b>1.6</b>	Poor: <b>1.0</b>	Very Poor: <b>1.4</b>				

**Comments:** Areas not affected by acid mine drainage are scoring in the Exceptional Warmwater Habitat range. Non-attainment is caused by mine-affected water entering Pine Creek from Kimble Creek and Negro Creek.

Causes of Impairment:

Metals - H  
 Siltation - M  
 pH - H

Sources of Impairment:

Mining - H  
 Mine tailings - H

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH33 66.1</b>	<b>09-424</b>	<b>3.45</b>	<b>0.00</b>	County:	
WB Name: <b>KIMBLE CREEK</b>				USEPA	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>3.45</b>		Reach Code:	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9808 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>1.65</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>1.80</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>1.6</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>1.8</b>
<b>Comments:</b> The lower 1.8 miles of this stream are severely degraded from acid mine drainage. The impaired stretch is devoid of fish. A restoration project will soon be funded to remediate the problems.					
Causes of Impairment:			Sources of Impairment:		
pH - H		Mine tailings - H			
Metals - H		Mining - H			
Salinity/TDS/chlorides - H					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH33 66.2</b>	<b>09-425</b>	<b>1.97</b>	<b>0.00</b>	County:	
WB Name: <b>SAW MILL RUN</b>				USEPA	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>1.97</b>		Reach Code:	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9606</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>1.97</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>1.9</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment is currently undesignated. The fish community scored well within the Warmwater Habitat (WWH) range (IBI=44). This segment should be designated WWH.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH34 5</b>	<b>02-001</b>	<b>189.60</b>	<b>177.36</b>	County: <b>MARION CO</b>	
WB Name: <b>SCIOTO RIVER (RUSH CREEK TO LITTLE SCIOTO RIVER)</b>				USEPA	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>12.24</b>		Reach Code: <b>05060001-034</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>11.24</b>	Full, But Threatened: <b>1.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>12.2</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment was fully attaining the Warmwater Habitat use designation. The former B.F. Goodrich disposal site was the only known significant threat to the water resource.					
Causes of Impairment:			Sources of Impairment:		
Metals - T		Landfills - T			

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH34 9</b>	<b>02-166</b>	<b>10.75</b>	<b>0.00</b>	County: <b>MARION CO</b>	
WB Name: <b>MCDONALD CREEK</b>				USEPA Reach Code: <b>05060001-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>10.75</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9509</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>10.75</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>10.7</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The AgriGeneral chicken farm was under construction in the headwaters during the time of sampling. Past and current channelization throughout the basin limit the ability of the stream to achieve Warmwater Habitat criteria. Biological quality was poor. The AgriGeneral facility may impact the stream even more with discharges related to chicken waste. This facility is a highly political issue within the county, with local residents highly opposed to its presence. Future biological monitoring is recommended.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H Siltation - M			Channelization - H Removal of riparian vegetation - H Nonirrigated crop production - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH34 13</b>	<b>02-001</b>	<b>203.56</b>	<b>189.60</b>	County: <b>MARION CO</b>	
WB Name: <b>SCIOTO RIVER (PANTHER CREEK TO RUSH CREEK)</b>				USEPA Reach Code: <b>05060001-035</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>13.96</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9506 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>13.96</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>5.8</b>	Good: <b>8.1</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment was fully attaining the Warmwater Habitat use designation. Habitat conditions are much higher quality than in upstream segments of the Scioto River.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH34 14</b>	<b>02-172</b>	<b>12.20</b>	<b>0.00</b>	County: <b>HARDIN CO</b>	
WB Name: <b>WILDCAT CREEK</b>				USEPA Reach Code: <b>05060001-119</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>12.20</b>			

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Assessment Cycle: **98**      Data Collection Period: **9506 to 9510**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>1.00</b>	<b>Partial:</b>	<b>1.00</b>	<b>None:</b>	<b>0.00</b>	<b>Not Assessed:</b>	<b>10.20</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.0</b>	<b>1.0</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>				

**Comments:** Marginal biological communities were attributed to unsewered wastewater discharges from the Village of Mt. Victory. Additional factors were past channelization and limited habitat. Mt. Victory is scheduled to be sewerred and start discharging into Panther Creek in 1996.

Causes of Impairment:

Cause Unknown - H

Sources of Impairment:

Onsite wastewater systems (septic tanks) - H

Channelization - M

Minor Municipal Point Source - T

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH34 17</b>	<b>02-001</b>	<b>213.07</b>	<b>203.56</b>	
WB Name: <b>SCIOTO RIVER (SILVER CREEK TO PANTHER CREEK)</b>				Ecoregion: <b>ECBP</b> County: <b>HARDIN CO</b> USEPA Reach Code: <b>05060001-035</b>
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>9.51</b>	

Assessment Cycle: **98**      Data Collection Period: **9506 to 9510**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>9.31</b>	Full, But Threatened:	<b>0.00</b>	<b>Partial:</b>	<b>0.20</b>	<b>None:</b>	<b>0.00</b>	<b>Not Assessed:</b>	<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>1.7</b>	<b>7.5</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>				

**Comments:** Channelization and siltation are the primary sources of non-attainment of Warmwater Habitat criteria in this segment. Additional impacts from organic enrichment are associated with the Kenton WWTP.

Causes of Impairment:

Other habitat alterations - H

Organic enrichment/DO - M

Siltation - S

Mercury - S

Sources of Impairment:

Channelization - H

Major Municipal Point Source - M

Combined Sewer Overflow - S

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH34 18</b>	<b>02-175</b>	<b>10.70</b>	<b>0.00</b>	
WB Name: <b>PANTHER CREEK</b>				Ecoregion: <b>ECBP</b> County: <b>HARDIN CO</b> USEPA Reach Code: <b>05060001-095</b>
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>10.70</b>	

Assessment Cycle: **98**      Data Collection Period: **9506 to 9510**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>7.15</b>	<b>Partial:</b>	<b>3.55</b>	<b>None:</b>	<b>0.00</b>	<b>Not Assessed:</b>	<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.0</b>	<b>7.1</b>	<b>3.5</b>	<b>0.0</b>	<b>0.0</b>				

**Comments:** Impacts were noted in this segment from several sources. Elevated ammonia levels and low dissolved oxygen originate from livestock pasture land and the unsewered Village of Ridgeway. Impacts were probably made worse by low and intermittent stream flows during periods of low precipitation.

Causes of Impairment:

Organic enrichment/DO - H

Sources of Impairment:

Pasture land - H

Onsite wastewater systems (septic tanks) - M

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH34 24</b>	<b>02-001</b>	<b>238.00</b>	<b>213.07</b>	County: <b>HARDIN CO</b>	
WB Name: <b>SCIOTO RIVER (HEADWATERS TO SILVER CREEK)</b>				USEPA Reach Code: <b>05060001-035</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>24.93</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>8.63</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>16.30</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>8.6</b>	Fair: <b>16.3</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: Channelization and siltation are the major reasons this segment does not meet Warmwater Habitat criteria. The fish scored in the fair range, while the macroinvertebrates scored in the exceptional range. Water quality appears to be good.			Sources of Impairment:		
Causes of Impairment: Other habitat alterations - H Siltation - M			Channelization - H Nonirrigated crop production - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH34 25</b>	<b>02-181</b>	<b>7.80</b>	<b>0.00</b>	County: <b>HARDIN CO</b>	
WB Name: <b>TAYLOR CREEK</b>				USEPA Reach Code: <b>05060001-115</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>7.80</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>5.70</b>	Full, But Threatened: <b>2.10</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>7.8</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: The biological communities in Taylor Creek were attaining Warmwater Habitat criteria. However, there is a concern about heavy metals contaminating the sediments downstream from Occidental Chemical Corp. High phosphorus concentrations from the Occidental Chemical Corp. WWTP were recorded.			Sources of Impairment:		
Causes of Impairment:					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH34 26</b>	<b>02-182</b>	<b>7.30</b>	<b>0.00</b>	County: <b>HARDIN CO</b>	
WB Name: <b>SILVER CREEK</b>				USEPA Reach Code: <b>05060001-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>7.30</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>4.50</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>2.80</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>4.5</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: One regional reference site was sampled on this stream. The biological communities scored in the good range.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH34 32</b>	<b>02-188</b>	<b>6.00</b>	<b>0.00</b>	County: <b>HARDIN CO</b>	
WB Name: <b>COTTONWOOD DITCH</b>				USEPA Reach Code: <b>05060001-</b>	
Aquatic Life Use(s): <b>WWH, MWH-C</b>		Segment Length: <b>6.00</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>3.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>3.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>3.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment is a classic channelized ditch. The lower portion of the stream, near McGuffey, was meeting the Modified Warmwater Habitat (MWH) use designation with fair biological communities.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH35 1</b>	<b>02-109</b>	<b>23.80</b>	<b>0.00</b>	County: <b>UNION CO</b>	
WB Name: <b>MILL CREEK (OTTER RUN TO SCIOTO RIVER)</b>				USEPA Reach Code: <b>05060001-037</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>23.80</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>17.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>5.10</b>	None: <b>1.70</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>17.0</b>	Fair: <b>5.1</b>	Poor: <b>1.7</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Organic enrichment and low dissolved oxygen associated with the Marysville WWTP were the major causes of impairment in this segment. While the stream begins to recover downstream from Marysville, stream quality is affected downstream from Crosses Run (which receives discharges from O.M. Scott Co.). Wide variation in the quality of fish communities between sampling passes suggests possible impacts from "slugs" of polluted water. Bioassay results indicated occasional toxicity in the Marysville WWTP effluent. Despite the impacts from Marysville, the overall quality of Mill Creek is improving. The lower 5 miles had exceptional quality, although nutrient levels were elevated throughout the reach from Marysville to the mouth.					
<b>Causes of Impairment:</b>			<b>Sources of Impairment:</b>		
Organic enrichment/DO - H			Major Municipal Point Source - H		
Unknown toxicity - M			Minor Industrial Point Source - M		
Metals - M			Urban Runoff/Storm Sewers (NPS) - S		
			Onsite wastewater systems (septic tanks) - S		
			Land Disposal - M		
			Spills - M		



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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH35 8</b>	<b>02-133</b>	<b>2.80</b>	<b>0.00</b>	County: <b>UNION CO</b>	
WB Name: <b>CROSSES RUN</b>				USEPA Reach Code: <b>05060001-</b>	
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>2.80</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9506 to 9510</b>	Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>2.80</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>2.8</b>
<b>Comments:</b> This stream is severely impacted by point sources and runoff originating from O.M. Scott Co. The entire length is in non-attainment of Warmwater Habitat criteria, showing severe effects of toxicity. Runoff from test fields are also potential sources of impact. Upstream from O.M. Scott Co. the stream has poor instream conditions influenced by intermittent flow conditions and a dairy farm.					
Causes of Impairment:			Sources of Impairment:		
Unionized Ammonia - H			Minor Industrial Point Source - H		
Unionized Ammonia - M			Land Disposal - H		
Pesticides - H			Spills - H		
Organic enrichment/DO - M			Feedlots (Confined Animal Feeding Oper.) - M		
Flow alteration - S			Natural - S		
Other habitat alterations - S			Channelization - S		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH35 8.1</b>	<b>02-253</b>	<b>2.10</b>	<b>0.00</b>	County: <b>UNION CO</b>	
WB Name: <b>TRIB. TO CROSSES RUN (O.M. SCOTT)</b>				USEPA Reach Code: <b>05060001-</b>	
Aquatic Life Use(s):	<b>NONE</b>	Segment Length:	<b>2.10</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9506 to 9510</b>	Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>2.10</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>2.1</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Severe toxic impacts were recorded downstream from O.M. Scott Co. at the mouth. Excessive levels of ammonia were present from point source discharges, and from spills and runoff from the O.M. Scott property. Pesticides and PAHs were also potential sources of impact. Non-attainment upstream was attributed to small stream size and intermittent flow conditions.					
Causes of Impairment:			Sources of Impairment:		
Flow alteration - H			Natural - H		
Unionized Ammonia - H			Minor Industrial Point Source - H		
Pesticides - M			Land Disposal - H		
Priority organics - M			Spills - H		
Organic enrichment/DO - S					
Other habitat alterations - S					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH35 9</b>	<b>02-109</b>	<b>48.87</b>	<b>23.80</b>	County:	
WB Name: <i>MILL CREEK (HEADWATERS TO OTTER RUN)</i>				USEPA	
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>25.07</b>	Reach Code:	<b>05060001-037</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9506 to 9510</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>16.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed:
					<b>9.07</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>16.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Comments:</b> Sites in this reach were sampled as background conditions upstream from Marysville. Highway construction on U.S. Rt. 33 may cause increased amounts of sediment to enter this segment via Otter Creek.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH35 11</b>	<b>02-135</b>	<b>5.80</b>	<b>0.00</b>	County:	<b>LOGAN CO</b>
WB Name: <i>OTTER CREEK</i>				USEPA	
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>5.80</b>	Reach Code:	<b>05060001-</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9506 to 9510</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>1.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed:
					<b>4.80</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Comments:</b> Possible impacts from stream relocation and sedimentation related to highway construction on U.S. Rt. 33 should be monitored in the future.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH35 12</b>	<b>02-001</b>	<b>161.88</b>	<b>155.40</b>	County:	<b>DELAWARE CO</b>
WB Name: <i>SCIOTO RIVER (BOKES CREEK TO MILL CREEK)</i>				USEPA	
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>6.48</b>	Reach Code:	<b>05060001-032</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9506 to 9510</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>5.88</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed:
					<b>0.60</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>5.8</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Comments:</b> Biological communities sampled at one location in this segment scored in the good to exceptional range. This segment appears to be improving. The lower 0.6 miles (O'Shaughnessy Dam pool) was not assessed.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH35 27</b>	<b>02-001</b>	<b>177.35</b>	<b>165.45</b>	County:	
WB Name: <i>SCIOTO RIVER (LITTLE SCIOTO RIVER TO FULTON CREEK)</i>					
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>11.90</b>		USEPA Reach Code: <b>05060001-032</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>5.46</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>6.45</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.4</b>	Fair: <b>0.0</b>	Poor: <b>6.4</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> Sites were sampled in the Prospect dam pool, and downstream from the dam. Upstream from the dam biological communities scored in the fair and poor range, while below the dam they recovered to full attainment of the Warmwater Habitat use designation. The Little Scioto River is the source of PAH contamination in the sediments.</p> <p>Causes of Impairment: Flow alteration - H Nutrients - M Nonpriority organics - S</p> <p>Sources of Impairment: Dam construction - H Major Municipal Point Source - M Hazardous waste - S</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH36 1</b>	<b>02-400</b>	<b>36.07</b>	<b>25.71</b>	County: <b>DELAWARE CO</b>	
WB Name: <i>OLENTANGY RIVER (WHETSTONE CREEK TO DELAWARE RUN)</i>					
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>10.36</b>		USEPA Reach Code: <b>05060001-028</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9608</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>5.40</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>4.96</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.4</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> Sampling was done at one regional reference site upstream from the Delaware WWTP and downstream from the Delaware Lake dam. No apparent problems were present. The macroinvertebrate community improved from good to near exceptional quality based on qualitative sampling results.</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH37 1</b>	<b>02-001</b>	<b>124.40</b>	<b>117.15</b>	County: <b>FRANKLIN CO</b>	
WB Name: <i>SCIOTO RIVER (SCIOTO BIG RUN TO BIG WALNUT CREEK)</i>					
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>7.25</b>		USEPA Reach Code: <b>05060001-027</b>	

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Assessment Cycle: **98**      Data Collection Period: **9606 to 9610**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>1.85</b>	Full, But Threatened:	<b>4.50</b>	Partial:	<b>0.90</b>	None:	<b>0.00</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.9</b>	<b>5.4</b>	<b>0.9</b>	<b>0.0</b>	<b>0.0</b>				

**Comments:** There has been significant improvement in this segment compared to past surveys. Positive changes have been directly attributed to reduced pollutant loads from the 2 WWTPs in Columbus and combined sewer overflows. Although biological communities indicated full attainment of Warmwater Habitat criteria, DELT anomalies in fish were markedly elevated within this reach.  
 Causes of Impairment:

Organic enrichment/DO - H

Sources of Impairment:

Combined Sewer Overflow - H  
 Major Municipal Point Source - M

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH37 6</b>	<b>02-001</b>	<b>132.33</b>	<b>124.40</b>	Ecoregion: <b>ECBP</b>
WB Name: <b>SCIOTO RIVER (OLENTANGY RIVER TO SCIOTO BIG RUN)</b>				County: <b>FRANKLIN CO</b>
Aquatic Life Use(s): <b>MWH-I, WWH</b>		Segment Length: <b>7.93</b>		USEPA Reach Code: <b>05060001-027</b>

Assessment Cycle: **98**      Data Collection Period: **9606 to 9610**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>5.18</b>	None:	<b>0.00</b>	Not Assessed:	<b>2.75</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.0</b>	<b>0.0</b>	<b>5.1</b>	<b>0.0</b>	<b>0.0</b>				

**Comments:** This entire segment showed impairment in 1996. Fish communities consistently met Warmwater Habitat criteria, but the macroinvertebrates scored only in the fair range. The Whittier Street bypass was a primary cause of impairment. Combined sewer overflows via the lower Olentangy River also contributed poor quality water during rainfall events. Water withdrawal from the Dublin Road WTP was a stressor, but not as significant as wastewater discharges in other parts of the segment.

Causes of Impairment:

Organic enrichment/DO - H  
 Other habitat alterations - M

Sources of Impairment:

Combined Sewer Overflow - H  
 Urban Runoff/Storm Sewers (NPS) - M  
 Channelization - M  
 Major Municipal Point Source - M

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH37 9</b>	<b>02-400</b>	<b>14.48</b>	<b>0.00</b>	Ecoregion: <b>ECBP</b>
WB Name: <b>OLENTANGY RIVER (BARTHOLOMEW RUN TO SCIOTO RIVER)</b>				County: <b>FRANKLIN CO</b>
Aquatic Life Use(s): <b>EWH, WWH</b>		Segment Length: <b>14.48</b>		USEPA Reach Code: <b>05060001-028</b>

Assessment Cycle: **98**      Data Collection Period: **9606 to 9610**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>2.00</b>	None:	<b>0.00</b>	Not Assessed:	<b>12.48</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.0</b>	<b>2.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>				

**Comments:** The lower portion of the Olentangy River showed impairment in 1996. Urban runoff and combined sewer overflows were major contributing factors. Conditions have shown improvement compared to previous surveys, rising from non-attainment to partial attainment of Warmwater Habitat criteria.

Causes of Impairment:

Unknown toxicity - H

Sources of Impairment:

Urban Runoff/Storm Sewers (NPS) - M  
 Combined Sewer Overflow - H

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH37 11</b>	<b>02-401</b>	<b>2.00</b>	<b>0.00</b>	County: <b>FRANKLIN CO</b>	
WB Name: <b>ADENA BROOK</b>				USEPA Reach Code: <b>05060001-054</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>2.00</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9606</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>2.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This is a small urban watershed which receives most of its flow from urban runoff. Marzetti's has a discharge in the headwaters which has caused several fish kills in the past. The stream goes intermittent during the summer months, but has a few large pools for refuges. The fish and macroinvertebrates both scored in the poor range.					
Causes of Impairment:			Sources of Impairment:		
Flow alteration - H			Minor Industrial Point Source - M		
Other inorganics - H			Urban Runoff/Storm Sewers (NPS) - M		
			Natural - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH37 13</b>	<b>02-400</b>	<b>25.71</b>	<b>14.48</b>	County: <b>DELAWARE CO</b>	
WB Name: <b>OLENTANGY RIVER (DELAWARE RUN TO BARTHOLOMEW RUN)</b>				USEPA Reach Code: <b>05060001-028</b>	
Aquatic Life Use(s): <b>WWH, EWH</b>		Segment Length: <b>11.23</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9608</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>1.60</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>9.63</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>1.6</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> One regional reference site was sampled in 1996 at Hyatts Rd. There was a marked decline in the IBI compared to sampling done in 1989. This segment still meets Warmwater Habitat criteria, but dropped from nearly Exceptional Warmwater Habitat (IBI=48) to nonsignificant departure from WWH (IBI=39). The macroinvertebrate community historically was also in the exceptional range. The Delaware WWTP is in the segment immediately upstream from this segment. Future monitoring is recommended to follow the downward trend.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH37 19</b>	<b>02-001</b>	<b>145.18</b>	<b>132.33</b>	County: <b>FRANKLIN CO</b>	
WB Name: <b>SCIOTO RIVER (INDIAN RUN TO OLENTANGY RIVER)</b>				USEPA Reach Code: <b>05060001-031</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>12.85</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>5.78</b>	Full, But Threatened: <b>1.57</b>	Partial: <b>5.50</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>3.2</b>	Good: <b>4.1</b>	Fair: <b>5.5</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: All of the free flowing portions of this segment attained Warmwater Habitat criteria. Partial attainment was limited to sections within the Griggs Reservoir dam pool. Attainment status in the impounded sections was attributed solely to impounded conditions. Periodic bypasses from the Dublin area occur, but major instream habitat differences (free-flowing upstream, impounded downstream) make it nearly impossible to determine any effects on the biological community. Water chemistry data were not available at the time of this assessment.			Sources of Impairment:		
Causes of Impairment: Other habitat alterations - H			Dam construction - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH37 19.2</b>	<b>02-266</b>	<b>5.30</b>	<b>0.00</b>	County: <b>FRANKLIN CO</b>	
WB Name: <b>TRABUE RUN</b>				USEPA Reach Code: <b>05060001-</b>	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>5.30</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9507</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>5.30</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>5.3</b>	Very Poor: <b>0.0</b>
Comments: This stream is channelized and receives poor water quality runoff from the Conrail railroad yard. The stream is not likely to improve in the near future. Spills and fish kills have been recorded.			Sources of Impairment:		
Causes of Impairment: Other habitat alterations - H Priority organics - H			Channelization - H Removal of riparian vegetation - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH37 19.4</b>	<b>02-275</b>	<b>3.07</b>	<b>0.00</b>	County: <b>FRANKLIN CO</b>	
WB Name: <b>CRAMER DITCH</b>				USEPA Reach Code: <b>05060001-</b>	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>3.07</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9510 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.50</b>	Not Assessed: <b>0.57</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>2.5</b>
Comments: A major sewage spill occurred sometime in 1995. No fish were present in the stream in October. Habitat was good, but water quality appears to be an issue due to overflows from a lift station in the headwaters.			Sources of Impairment:		
Causes of Impairment: Organic enrichment/DO - H			Combined Sewer Overflow - M Spills - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH37 20</b>	<b>02-095</b>	<b>5.10</b>	<b>0.00</b>	County: <b>FRANKLIN CO</b>	
WB Name: <b>DRY RUN</b>				USEPA Reach Code: <b>05060001-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>5.10</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9510 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	Full, But Threatened:	Partial:	None:	Not Assessed:	
<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.10</b>	<b>0.00</b>	
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>5.1</b>	<b>0.0</b>
<b>Comments:</b> Dry Run is an urban watershed. Habitat conditions are good, but the water quality is poor. Fish communities were in the poor range, the result of stormwater and urban runoff. Numerous spills and fish kills have been documented.					
Causes of Impairment:			Sources of Impairment:		
Unknown toxicity - H			Spills - H		
Nutrients - M			Urban Runoff/Storm Sewers (NPS) - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH37 24</b>	<b>02-099</b>	<b>5.60</b>	<b>0.00</b>	County: <b>FRANKLIN CO</b>	
WB Name: <b>SOUTH FORK INDIAN RUN</b>				USEPA Reach Code: <b>05060001-110</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>5.60</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9608 to 9608</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	Full, But Threatened:	Partial:	None:	Not Assessed:	
<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.70</b>	<b>2.90</b>	
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>0.0</b>	<b>2.7</b>	<b>0.0</b>	<b>0.0</b>
<b>Comments:</b> This segment had been channelized historically, and currently is not under stream maintenance. Knee-deep silt was present in the stream channel. Fish sampling done in the headwaters fell short of Warmwater Habitat criteria, but easily attained Modified Warmwater Habitat (MWH) criteria.					
Causes of Impairment:			Sources of Impairment:		
Siltation - H			Agriculture - H		
Other habitat alterations - M			Hydromodification - H		
Nutrients - S					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH37 25</b>	<b>02-001</b>	<b>155.40</b>	<b>145.18</b>	County: <b>DELAWARE CO</b>	
WB Name: <b>SCIOTO RIVER (MILL CREEK TO INDIAN RUN)</b>				USEPA Reach Code: <b>05060001-031</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>10.22</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9506 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	Full, But Threatened:	Partial:	None:	Not Assessed:	
<b>3.72</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.50</b>	
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>3.7</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Comments:</b> The biological community within O'Shaughnessy Reservoir was not evaluated in 1995. One site downstream from the dam near I-270 indicated that the biological community was marginally good to good.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH38 1</b>	<b>02-100</b>	<b>15.30</b>	<b>0.00</b>	County: <b>FRANKLIN CO</b>	
WB Name: <b>BIG WALNUT CREEK (ALUM/BLACKLICK CR. TO SCIOTO R.)</b>				USEPA Reach Code: <b>05060001-011</b>	
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>15.30</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9608 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>5.00</b>	None: <b>0.00</b>	Not Assessed: <b>10.30</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: Fish sampling results have declined since the 1991 survey. A substantial bedload of silt and soil associated with the Port Columbus Airport runway expansion project has influenced the lower 27 miles of Big Walnut Creek.			Sources of Impairment:		
Causes of Impairment: Siltation - H			Highway/road/bridge/sewer line - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH38 2</b>	<b>02-110</b>	<b>19.90</b>	<b>0.00</b>	County: <b>FRANKLIN CO</b>	
WB Name: <b>ALUM CREEK (COLUMBUS BOUNDARY TO BIG WALNUT CREEK)</b>				USEPA Reach Code: <b>05060001-026</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>19.90</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>10.40</b>	Partial: <b>7.60</b>	None: <b>1.00</b>	Not Assessed: <b>0.90</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>10.4</b>	Fair: <b>7.6</b>	Poor: <b>1.0</b>	Very Poor: <b>0.0</b>
Comments: The lead causes of impairment in this segment include urban and stormwater runoff, combined sewer overflows, contaminated sediments, impoundments, and other habitat modifications. Sediments were contaminated with PAHs, PCBs, arsenic, zinc and cadmium at most of the sediment stations. The greatest level of contamination was found at river mile 9.2, downstream from American Ditch. Water quality problems included high fecal coliforms concentrations, and low dissolved oxygen levels. Despite all of the above, overall conditions in Alum Creek have improved compared to sampling done in 1986. Impacts from the Huber Ridge WWTP were minimal, significantly reduced compared to previous surveys.			Sources of Impairment:		
Causes of Impairment: Cause Unknown - H			Other Urban Runoff - M		
Flow alteration - M			Combined Sewer Overflow - H		
Organic enrichment/DO - H			Urban Runoff/Storm Sewers (NPS) - M		
Cadmium - M			Other Urban Runoff - M		
Priority organics - M			Hydromodification - M		
Zinc - M			Channelization - M		
Flow alteration - M			Contaminated sediments - M		
Other habitat alterations - M					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH38 4</b>	<b>02-110</b>	<b>26.70</b>	<b>19.90</b>	County: <b>DELAWARE CO</b>	
WB Name: <b>ALUM CREEK (ALUM CREEK DAM TO COLUMBUS BOUNDARY)</b>				USEPA Reach Code: <b>05060001-026</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>6.80</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>6.80</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment: <b>0.0</b>	Excellent: <b>0.0</b>	Good: <b>6.8</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> All sampling locations within this segment were in full attainment of Warmwater Habitat criteria for fish and macroinvertebrate communities.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH38 5</b>	<b>02-110</b>	<b>42.80</b>	<b>26.70</b>	County: <b>DELAWARE CO</b>	
WB Name: <b>BIG RUN</b>				USEPA Reach Code: <b>05060001-026</b>	
Aquatic Life Use(s): <b>LAKE</b>		Segment Length: <b>16.10</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>2.70</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>13.40</b>	
Narrative Assessment: <b>2.7</b>	Excellent: <b>2.7</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Sites upstream from Alum Creek Reservoir contained exceptional fish and macroinvertebrate communities. The reservoir portion of this reach was not sampled.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH38 12</b>	<b>02-118</b>	<b>11.80</b>	<b>0.00</b>	County: <b>DELAWARE CO</b>	
WB Name: <b>WEST BRANCH ALUM CREEK</b>				USEPA Reach Code: <b>05060001-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>11.80</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>4.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>7.80</b>	
Narrative Assessment: <b>4.0</b>	Excellent: <b>4.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The fish and macroinvertebrate communities both scored in the exceptional range. A large population of bigeye chubs (sensitive, declining fish species) was present in this stream. This segment is currently designated Warmwater Habitat, but is recommended for upgrading to Exceptional Warmwater Habitat.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH38 14</b>	<b>02-110</b>	<b>55.80</b>	<b>42.80</b>	County: <b>MORROW CO</b>	
WB Name: <b>ALUM CREEK (HEADWATERS TO WEST BRANCH ALUM CREEK)</b>				USEPA Reach Code: <b>05060001-026</b>	
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>13.00</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9606 to 9610</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>1.30</b>
				None:	<b>0.00</b>
					Not Assessed: <b>11.70</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>1.3</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: The fish and macroinvertebrate communities both scored in the exceptional range. The headwater nature of the stream may be the cause of low Modified Index of Well-being (MIwb) scores, with the result being only partial attainment of Exceptional Warmwater Habitat.			Sources of Impairment:		
Causes of Impairment:					
Cause Unknown - H			Natural - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH38 17</b>	<b>02-130</b>	<b>28.00</b>	<b>0.00</b>	County: <b>FRANKLIN CO</b>	
WB Name: <b>BLACKLICK CREEK</b>				USEPA Reach Code: <b>05060001-</b>	
Aquatic Life Use(s): <b>WWH, EWH</b>		Segment Length: <b>28.00</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9607 to 9609</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>13.70</b>	Partial:	<b>4.60</b>
				None:	<b>8.70</b>
					Not Assessed: <b>1.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>17.2</b>	Fair: <b>9.8</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: Several factors attribute to impairment within this segment. Intermittent stream conditions, land applied livestock wastes, and land use practices affect the upper reaches. Suburban development is increasing, resulting in riparian encroachment and runoff. Three WWTPs are located in this segment. There have been significant improvements in the lower portion, specifically downstream from the Blacklick Estates WWTP. Impairment recorded in the mid-1980s has improved to nearly full recovery. While areas of the stream are in full attainment of Warmwater Habitat criteria, they are in the low end, barely into attainment. Future monitoring is recommended to follow the effects of development within the basin.			Sources of Impairment:		
Causes of Impairment:					
Organic enrichment/DO - M			Hydromodification - H		
Flow alteration - H			Land development/Suburbanization - M		
Flow alteration - M			Land Disposal - M		
Nutrients - H			Onsite wastewater systems (septic tanks) - M		
Organic enrichment/DO - H			Onsite wastewater systems (septic tanks) - M		
Cause Unknown - H			Major Municipal Point Source - M		
			Natural - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b> County: _____ USEPA Reach Code: _____					
<b>OH38 17.1</b>	<b>02-281</b>	<b>4.98</b>	<b>0.00</b>						
WB Name: <i>DYSAR RUN</i>									
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>4.98</b>							
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9610 to 9610</b>		Assessment Age: <b>Current</b>					
Aquatic Life Use Attainment:									
Full:	<b>0.00</b>	Full, But Threatened:	<b>4.00</b>	Partial:	<b>0.00</b>	None:	<b>0.00</b>	Not Assessed:	<b>0.98</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>4.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>				
Comments: Residential development, sewer line construction, and habitat alteration from construction activities threaten the biological and water quality of this stream. Causes of Impairment: _____ Sources of Impairment: _____									

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b> County: <b>FRANKLIN CO</b> USEPA Reach Code: <b>05060001-</b>					
<b>OH38 18</b>	<b>02-100</b>	<b>28.30</b>	<b>15.30</b>						
WB Name: <i>BIG WALNUT CREEK (ROCKY FORK TO ALUM CREEK)</i>									
Aquatic Life Use(s): <b>WWH, EWH</b>		Segment Length: <b>13.00</b>							
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9608 to 9610</b>		Assessment Age: <b>Current</b>					
Aquatic Life Use Attainment:									
Full:	<b>12.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>1.00</b>	None:	<b>0.00</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>12.0</b>	Fair: <b>1.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>				
Comments: The 1996 study concentrated on the area adjacent to the D.E. Edwards Landfill. However, heavy sedimentation of the stream bottom was noted as a result of the Port Columbus Airport runway expansion project. Causes of Impairment: _____ Sources of Impairment: _____ Siltation - H Construction - H									

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b> County: _____ USEPA Reach Code: _____					
<b>OH38 18.1</b>	<b>02-280</b>	<b>4.00</b>	<b>0.00</b>						
WB Name: <i>TRIB. TO BIG WALNUT CREEK (RM 27.29)</i>									
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>4.00</b>							
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9608 to 9610</b>		Assessment Age: <b>Current</b>					
Aquatic Life Use Attainment:									
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>	None:	<b>0.50</b>	Not Assessed:	<b>3.50</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.5</b>	Very Poor: <b>0.0</b>				
Comments: This stream flows through the Port Columbus Airport. The fish community was poor due to channelization, sedimentation from construction activities, and de-icing chemicals entering the stream from the airport. Causes of Impairment: _____ Sources of Impairment: _____ Siltation - H Construction - H Nutrients - H Urban Runoff/Storm Sewers (NPS) - M									

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH38 19</b>	<b>02-122</b>	<b>7.00</b>	<b>0.00</b>	County: <b>FRANKLIN CO</b>	
WB Name: <b>MASON RUN</b>				USEPA Reach Code: <b>05060001-053</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>7.00</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9608 to 9609</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>2.10</b>
				None:	<b>4.00</b>
					Not Assessed: <b>0.90</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.1</b>	Poor: <b>0.0</b>	Very Poor: <b>4.0</b>
<p><b>Comments:</b> The upper 4.2 miles of this segment have been previously modified, with 1.5 miles completely enclosed in a culvert. The cause of biological impairment is uncertain. Permitted discharges and urban stormwater runoff appear to be major factors.</p> <p>Causes of Impairment: Unknown toxicity - H Siltation - M Other habitat alterations - M</p> <p>Sources of Impairment: Industrial Point Sources - H Urban Runoff/Storm Sewers (NPS) - H Hydromodification - M</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH38 21</b>	<b>02-123</b>	<b>13.00</b>	<b>0.00</b>	County: <b>FRANKLIN CO</b>	
WB Name: <b>ROCKY FORK</b>				USEPA Reach Code: <b>05060001-016</b>	
Aquatic Life Use(s): <b>WWH, EWH</b>		Segment Length: <b>13.00</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9609</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>2.30</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>5.70</b>
				None:	<b>5.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.5</b>	Good: <b>2.8</b>	Fair: <b>9.7</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> Nutrient enrichment and siltation appear to be the causes of partial attainment in the upper reach. Siltation appears to be having the greatest effect in the lower reach. Previous noted "threats" have now become reality. Land development and construction activities in the New Albany area have had major negative effects on this stream.</p> <p>Causes of Impairment: Siltation - H Turbidity - M Organic enrichment/DO - H</p> <p>Sources of Impairment: Land development/Suburbanization - H Onsite wastewater systems (septic tanks) - M Package Plants (Small Flows) - M</p>					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH38 21.1</b>	<b>02-252</b>	<b>3.40</b>	<b>0.00</b>	County: <b>FRANKLIN CO</b>	
WB Name: <b>ROSE RUN</b>				USEPA Reach Code: <b>05060001-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>3.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9608 to 9609</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.60</b>	None: <b>0.00</b>	Not Assessed: <b>2.80</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.6</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Residential development in the New Albany area has affected this stream for the past several years. Heavy sediment loads have reduced the quality of the stream. The fish community at river mile 0.6 appears to be improving from the initial impact, rising from the fair range in 1991 to attainment of Warmwater Habitat criteria in 1996. The macroinvertebrate community has declined, falling from moderately good in 1999 to fair. Construction of a sewer line in New Albany altered the influx of groundwater to the stream, resulting in lower flows downstream than historically recorded.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H			Channelization - H		
Siltation - M			Land development/Suburbanization - M		
Flow alteration - M			Natural - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH38 21.2</b>	<b>02-260</b>	<b>5.83</b>	<b>0.00</b>	County: <b>FRANKLIN CO</b>	
WB Name: <b>SUGAR RUN (NEW ALBANY)</b>				USEPA Reach Code: <b>05060001-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>5.83</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9609</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>4.30</b>	Full, But Threatened: <b>1.50</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.03</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.8</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Sedimentation from highway construction (re-routing of St. Rt. 161) is a threat to the lower 1.5 miles of this segment. Qualitative macroinvertebrate data in 1996 indicate good water quality at river mile 0.4.					
Causes of Impairment:			Sources of Impairment:		
Siltation - T			Highway/road/bridge/sewer line - T		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH38 36</b>	<b>02-100</b>	<b>62.76</b>	<b>53.35</b>	County:	
WB Name: <b>BIG WALNUT CREEK (REYNOLDS RUN TO CULVER CREEK)</b>					
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>9.41</b>	USEPA Reach Code:	<b>05060001-025</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9607 to 9609</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>9.41</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>9.4</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Two regional reference sites were sampled in this segment in 1996. No major problems were noted. A modest decline in the IBI was observed near Marengo compared to sampling done in previous years. The macroinvertebrate community has remained stable since 1982.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH39 1.1</b>	<b>02-274</b>	<b>3.50</b>	<b>0.00</b>	County:	<b>PICKAWAY CO</b>
WB Name: <b>TRIB. TO BIG DARBY CREEK (RM 8.80)</b>					
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>3.50</b>	USEPA Reach Code:	<b>05060001-</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9507 to 9507</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>3.50</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>3.5</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is a small headwaters stream. The upper portion is channelized through fields of row crop agriculture. The lower portion flows through a forested area and into the Big Darby Creek valley. During the summer it goes intermittent, but has deep pools which serve as refuges for fish.					
Causes of Impairment:			Sources of Impairment:		
Flow alteration - H			Natural - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH39 8</b>	<b>02-210</b>	<b>17.46</b>	<b>0.00</b>	County:	
WB Name: <b>LITTLE DARBY CREEK (SPRING FORK TO BIG DARBY CR.)</b>					
Aquatic Life Use(s):	<b>EWH</b>	Segment Length:	<b>17.46</b>	USEPA Reach Code:	<b>05060001-046</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9608 to 9608</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>17.46</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>17.4</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment is exceptional in biological quality, and has remained stable over many years of sampling. There is high diversity of aquatic organisms and numerous species sensitive to pollution. The West Jefferson WWTP has little effect on the stream. Residential development within the basin should be closely monitored. Increased sedimentation may cause impacts to the biological community.					



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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH40 1</b>	<b>02-001</b>	<b>106.10</b>	<b>100.80</b>	County:	<b>PICKAWAY CO</b>
WB Name: <i>SCIOTO RIVER (WALNUT CREEK TO BIG DARBY CREEK)</i>				USEPA Reach Code:	<b>05060001-002</b>
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>5.30</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>5.30</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>2.1</b>	Good: <b>3.2</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Biological communities in this segment ranged from good to very good, fully attaining Warmwater Habitat criteria. No significant impacts from the Columbus Southerly WWTP were evident. Biological communities have improved compared to previous surveys.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH40 4</b>	<b>02-078</b>	<b>5.47</b>	<b>0.00</b>	County:	<b>PICKAWAY CO</b>
WB Name: <i>WALNUT CREEK (LITTLE WALNUT CREEK TO SCIOTO RIVER)</i>				USEPA Reach Code:	<b>05060001-003</b>
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>5.47</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>4.47</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>1.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>4.4</b>	Fair: <b>1.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The cause of partial attainment is uncertain. It appears that development within the basin is resulting in sedimentation in the lower reach. Future monitoring is recommended to better assess the situation.					
Causes of Impairment:			Sources of Impairment:		
Cause Unknown - H		Land development/Suburbanization - H			
Siltation - H		Source Unknown - H			

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH40 5</b>	<b>02-079</b>	<b>12.45</b>	<b>0.00</b>	County:	<b>PICKAWAY CO</b>
WB Name: <i>LITTLE WALNUT CREEK</i>				USEPA Reach Code:	<b>05060001-004</b>
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>12.45</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>11.45</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>1.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>9.4</b>	Good: <b>2.0</b>	Fair: <b>1.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The lower portion of this segment is impacted by sedimentation from nonpoint source runoff. The upper reaches scored in the exceptional range. It is recommended that the headwaters to the confluence of Turkey Run be upgraded to the use designation Exceptional Warmwater Habitat.					
Causes of Impairment:			Sources of Impairment:		
Siltation - H		Agriculture - H			
Nutrients - M					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH40 6</b>	<b>02-080</b>	<b>7.00</b>	<b>0.00</b>	County: <b>PICKAWAY CO</b>	
WB Name: <b>TURKEY RUN</b>				USEPA Reach Code: <b>05060001-116</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>7.00</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>7.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>7.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment had previously been unassessed. Biological communities scored in the Exceptional Warmwater Habitat range.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH40 9</b>	<b>02-078</b>	<b>21.15</b>	<b>5.47</b>	County: <b>PICKAWAY CO</b>	
WB Name: <b>WALNUT CREEK (GEORGE CREEK TO LITTLE WALNUT CREEK)</b>				USEPA Reach Code: <b>05060001-005</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>15.68</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>15.68</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>15.6</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Much development is occurring within the watershed. Biological communities scored in the very good range.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH40 9.1</b>	<b>02-279</b>	<b>2.96</b>	<b>0.00</b>	County:	
WB Name: <b>MANN'S RUN</b>				USEPA Reach Code:	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>2.96</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>2.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.96</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Mann's Mobile Home Park WWTP contributes nutrients to this stream. However, no biological impairments were recorded attributable to the WWTP. The fish communities scored in the good to very good range. The macroinvertebrates scored in the fair range (cause and source unknown). This stream also drains from Rickenbacker Airport and through a golf course.					
Causes of Impairment:			Sources of Impairment:		
Cause Unknown - H			Source Unknown - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH40 9.2</b>	<b>02-277</b>	<b>0.56</b>	<b>0.00</b>	County:	
WB Name: <i>TRIB. TO WALNUT CREEK (RM 15.54)</i>					
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>0.56</b>		USEPA Reach Code:	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.56</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.5</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> This unnamed tributary is a apparently a channel cut into the landscape where no previous stream had existed. Although it is a man-made ditch, it had beneficial habitat features such as trees in the riparian area, and deep pools. It receives WWTP effluent and stormwater runoff from Rickenbacker Airport.</p> <p>Causes of Impairment: Other habitat alterations - H Unknown toxicity - H</p> <p>Sources of Impairment: Channelization - H Urban Runoff/Storm Sewers (NPS) - H</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH40 9.3</b>	<b>02-278</b>	<b>2.85</b>	<b>0.00</b>	County:	
WB Name: <i>TRIB. TO WALNUT CREEK (RM 15.64)</i>					
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>2.85</b>		USEPA Reach Code:	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.60</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.40</b>	None: <b>0.00</b>	Not Assessed: <b>1.85</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.6</b>	Fair: <b>0.4</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> Biological communities upstream from the mouth were attaining Warmwater Habitat criteria. In the lower 0.4 miles low gradient conditions contributed to the macroinvertebrate community only scoring in the fair range (due to low habitat diversity). Water column chemistry results indicate good water quality.</p> <p>Causes of Impairment: Other habitat alterations - H</p> <p>Sources of Impairment: Agriculture - H</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH40 10</b>	<b>02-198</b>	<b>4.20</b>	<b>0.00</b>	County: <b>PICKAWAY CO</b>	
WB Name: <i>MUD RUN</i>					
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>4.20</b>		USEPA Reach Code: <b>05060001-</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>4.20</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>4.2</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> This segment had previously been unassessed. Biological communities attained Warmwater Habitat criteria. This is an agricultural watershed.</p>					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH40 11</b>	<b>02-083</b>	<b>4.90</b>	<b>0.00</b>	County: <b>FRANKLIN CO</b>	
WB Name: <b>BIG RUN</b>				USEPA Reach Code: <b>05060001-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>4.90</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>4.90</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>4.9</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment had previously been unassessed. Biological communities attained Warmwater Habitat criteria. This is an agricultural watershed.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH40 12</b>	<b>02-084</b>	<b>8.50</b>	<b>0.00</b>	County: <b>FRANKLIN CO</b>	
WB Name: <b>GEORGES CREEK</b>				USEPA Reach Code: <b>05060001-009</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>8.50</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>2.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>4.50</b>	None: <b>2.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>2.0</b>	Fair: <b>6.5</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The lower 2 miles of this segment are attaining WWH criteria. The middle reach is channelized and is in non-attainment. The upper reach partially attains Warmwater Habitat criteria.					
Causes of Impairment:			Sources of Impairment:		
Siltation - H		Land development/Suburbanization - H			
Flow alteration - H		Channelization - H			

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH40 12.1</b>	<b>02-231</b>	<b>8.50</b>	<b>0.00</b>	County: <b>FRANKLIN CO</b>	
WB Name: <b>TRIB. TO GEORGES CREEK</b>				USEPA Reach Code: <b>05060001-</b>	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>8.50</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>3.50</b>	Partial: <b>5.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>3.5</b>	Fair: <b>5.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Upstream from river mile 5.0 the stream is small, and is recovering from the effects of suburban development. It is presently attaining Warmwater Habitat criteria. The lower 5.0 miles are impacted by sedimentation from current development in the area.					
Causes of Impairment:			Sources of Impairment:		
Siltation - H		Land development/Suburbanization - H			
Other habitat alterations - T					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH40 13</b>	<b>02-078</b>	<b>29.18</b>	<b>21.15</b>	County: <b>FAIRFIELD CO</b>	
WB Name: <b>WALNUT CREEK (SYCAMORE CREEK TO GEORGE CREEK)</b>				USEPA Reach Code: <b>05060001-005</b>	
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>8.03</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9607 to 9610</b>	Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>8.03</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>8.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Development is increasing within the watershed. The biological communities scored in the very good range.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH40 14</b>	<b>02-226</b>	<b>8.00</b>	<b>0.00</b>	County: <b>FRANKLIN CO</b>	
WB Name: <b>TUSSING DITCH</b>				USEPA Reach Code: <b>05060001-</b>	
Aquatic Life Use(s):	<b>MWH-C, WWH</b>	Segment Length:	<b>8.00</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9607 to 9610</b>	Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.50</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>7.50</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.5</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Only the lower 0.5 miles was assessed. Biological communities scored in the good to moderately good ranges near the mouth.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH40 15</b>	<b>02-085</b>	<b>13.60</b>	<b>0.00</b>	County: <b>FAIRFIELD CO</b>	
WB Name: <b>SYCAMORE CREEK</b>				USEPA Reach Code: <b>05060001-008</b>	
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>13.60</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9607 to 9610</b>	Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>12.60</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>1.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>12.6</b>	Fair: <b>1.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Several small WWTPs are present in this segment. The Huntington Hills WWTP contributes ammonia and nutrients which cause a decline in the fish communities downstream. The rapidly developing area is contributing urban runoff.					
<b>Causes of Impairment:</b>			<b>Sources of Impairment:</b>		
Cause Unknown - H			Source Unknown - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH40 16</b>	<b>02-078</b>	<b>41.39</b>	<b>29.18</b>	County:	<b>FAIRFIELD CO</b>
WB Name: <b>WALNUT CREEK (PAWPAW CREEK TO SYCAMORE CREEK)</b>				USEPA	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>12.21</b>		Reach Code:	<b>05060001-</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9607 to 9610</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>12.21</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>12.2</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> There is much development occurring within the watershed. Biological communities scored in the very good range.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH40 17</b>	<b>02-199</b>	<b>6.50</b>	<b>0.00</b>	County:	<b>FAIRFIELD CO</b>
WB Name: <b>GILLETTE RUN</b>				USEPA	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>6.50</b>		Reach Code:	<b>05060001-</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9607 to 9610</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>6.50</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>6.5</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This is a small stream in a rural residential area. Some improvement was noted in the biological quality since sampling done in 1982.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH40 18</b>	<b>02-086</b>	<b>9.30</b>	<b>0.00</b>	County:	<b>FAIRFIELD CO</b>
WB Name: <b>POPLAR CREEK</b>				USEPA	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>9.30</b>		Reach Code:	<b>05060001-101</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9607 to 9610</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>8.30</b>	Partial:	<b>1.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>8.3</b>	Good: <b>1.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream had the best biological performance in the Walnut Creek basin. The lower reach was influenced by development in the upper reaches, and by agricultural runoff. It is recommended that this segment be upgraded to the use designation Exceptional Warmwater Habitat.					
<b>Causes of Impairment:</b>			<b>Sources of Impairment:</b>		
Flow alteration - H			Land development/Suburbanization - H		
Siltation - M			Agriculture - M		
Nutrients - T			Land development/Suburbanization - T		
Other habitat alterations - T					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH40 19</b>	<b>02-087</b>	<b>4.70</b>	<b>0.00</b>	County: <b>FAIRFIELD CO</b>	
WB Name: <b>PAWPAW CREEK</b>				USEPA Reach Code: <b>05060001-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>4.70</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>4.70</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>4.7</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This is a small stream which flows through rural residential areas, and through the city of Baltimore. An unnamed tributary enters at river mile 0.5 which receives effluent from Ohio Paperboard Co.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH40 20</b>	<b>02-224</b>	<b>6.79</b>	<b>0.00</b>	County: <b>FAIRFIELD CO</b>	
WB Name: <b>ZELLERBACH TRIB.</b>				USEPA Reach Code: <b>05060001-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>6.79</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>6.59</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.20</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>6.5</b>	Fair: <b>0.2</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Effluent from Ohio Paperboard Co. has limited influence on the biological communities. Impacts are within the lower 0.2 miles of the stream.					
Causes of Impairment: Organic enrichment/DO - H			Sources of Impairment: Major Industrial Point Source - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH40 21</b>	<b>02-078</b>	<b>54.44</b>	<b>41.39</b>	County: <b>FAIRFIELD CO</b>	
WB Name: <b>WALNUT CREEK (HEADWATERS TO PAWPAW CREEK)</b>				USEPA Reach Code: <b>05060001-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>13.05</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>13.05</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>13.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment flows through agricultural areas. Biological communities scored in the very good range.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>EOLP</b>
<b>OH40 22</b>	<b>02-225</b>	<b>7.40</b>	<b>0.00</b>	County:	<b>FAIRFIELD CO</b>
WB Name: <i>PLEASANTVILLE-THURSTON WWTP TRIB.</i>				USEPA Reach Code:	<b>05060001-</b>
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>7.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>2.00</b>	None: <b>0.00</b>	Not Assessed: <b>5.40</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: Water quality and habitat appeared to be good, but biological communities only scored in the fair range. The cause of non-attainment is uncertain.			Sources of Impairment:		
Causes of Impairment: Cause Unknown - H			Source Unknown - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH40 23</b>	<b>02-001</b>	<b>117.15</b>	<b>106.10</b>	County:	<b>PICKAWAY CO</b>
WB Name: <i>SCIOTO RIVER (BIG WALNUT CREEK TO WALNUT CREEK)</i>				USEPA Reach Code:	<b>05060001-010</b>
Aquatic Life Use(s): <b>WWH, EWH</b>		Segment Length: <b>11.05</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>11.05</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>4.8</b>	Good: <b>6.2</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: Biological communities in this segment ranged from good to very good. There was no significant impact from the Columbus Southerly WWTP. Biological communities have improved compared to previous surveys.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH41 11</b>	<b>02-300</b>	<b>16.86</b>	<b>7.21</b>	County:	<b>PICKAWAY CO</b>
WB Name: <i>DEER CREEK (DRY RUN TO HAY RUN)</i>				USEPA Reach Code:	<b>05060002-</b>
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>9.65</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9509 to 9509</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>9.65</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>9.6</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: Macroinvertebrate sampling was done in the vicinity of the Williamsport WWTP. This segment meets Warmwater Habitat criteria. Future chemical and biological sampling is recommended to monitor the possible impacts from the Williamsport WWTP.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH41 14</b>	<b>02-305</b>	<b>5.30</b>	<b>0.00</b>	County: <b>PICKAWAY CO</b>	
WB Name: <b>BUSKIRK CREEK</b>				USEPA Reach Code: <b>05060002-093</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>5.30</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9507</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>4.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>1.30</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>2.2</b>	Good: <b>1.8</b>	Fair: <b>1.3</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: Good riparian is present throughout much of the stream length. A high quality fish community is present in the lower portion of the stream (IBI=50). An agricultural chemical company in the headwaters may have intermittent discharges.			Sources of Impairment:		
Causes of Impairment:					
Nutrients - H			Agriculture - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH41 33</b>	<b>02-001</b>	<b>100.80</b>	<b>89.61</b>	County: <b>PICKAWAY CO</b>	
WB Name: <b>SCIOTO RIVER (BIG DARBY CREEK TO SCIPPO CREEK)</b>				USEPA Reach Code: <b>05060002-</b>	
Aquatic Life Use(s): <b>EWH, WWH</b>		Segment Length: <b>11.20</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>11.20</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>11.2</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: Biological communities throughout this segment ranged from very good to exceptional. No impacts were attributed to the Circleville WWTP or Container Corporation.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH41 39</b>	<b>02-074</b>	<b>6.60</b>	<b>0.00</b>	County: <b>PICKAWAY CO</b>	
WB Name: <b>HARGUS CREEK</b>				USEPA Reach Code: <b>05060002-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>6.60</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9608 to 9608</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>4.10</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>1.20</b>	Not Assessed: <b>1.30</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>4.1</b>	Fair: <b>1.2</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: The City of Circleville removed numerous trees from the banks to alleviate local flooding. Some bank stabilization (riprap) was installed, but some banks are rapidly degrading due to vegetation removal. IBI scores declined at 4 of 5 sites compared to sampling done in 1992. Heavy sand deposition is present at Ted Lewis Park, but it is not related to the flood prevention project. Future biological monitoring is recommended.			Sources of Impairment:		
Causes of Impairment:					
Other habitat alterations - H			Channelization - H		
Siltation - H			Nonirrigated crop production - M		
			Urban Runoff/Storm Sewers (NPS) - M		
			Removal of riparian vegetation - M		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH41 40</b>	<b>02-075</b>	<b>3.70</b>	<b>0.00</b>	County: <b>PICKAWAY CO</b>	
WB Name: <b>HOMINY CREEK</b>				USEPA Reach Code: <b>05060002-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>3.70</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9608 to 9608</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>3.70</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>3.7</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream runs directly adjacent to State Route 56, and was probably channelized long ago. A good riparian buffer is present on the opposite bank from the road. Septic discharges were observed in the segment. The one site sampled was in attainment of Warmwater Habitat criteria in 1992, but declined in 1996 (IBI=34).					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - S			Nonirrigated crop production - H		
			Channelization - S		
			Onsite wastewater systems (septic tanks) - S		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH42 11</b>	<b>02-557</b>	<b>6.10</b>	<b>0.00</b>	County: <b>HIGHLAND CO</b>	
WB Name: <b>WALNUT CREEK</b>				USEPA Reach Code: <b>05060003-071</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>6.10</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9609 to 9609</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>4.00</b>	Full, But Threatened:	<b>2.10</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>6.1</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Fish and macroinvertebrates both scored in the Exceptional Warmwater Habitat range even though sampling was done during a long, extended drought. This segment is threatened due to the proposed construction of a large mobile home park.					
Causes of Impairment:			Sources of Impairment:		
Organic enrichment/DO - T			Package Plants (Small Flows) - T		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>WAP</b>	
<b>OH45 18</b>	<b>02-815</b>	<b>3.10</b>	<b>0.00</b>	County: <b>PIKE CO</b>	
WB Name: <b>KINCAID CREEK</b>				USEPA Reach Code: <b>05060002-130</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>3.10</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9608 to 9608</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>1.10</b>
					Not Assessed: <b>2.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.8</b>	Very Poor: <b>0.3</b>
<b>Comments:</b> This stream is mostly affected by natural conditions, probably going intermittent or dry during the summer months. Habitat is excellent, but low flow conditions and possible runoff from Miller Lumber Company, may cause stress to the biological community in the flowing areas.					
Causes of Impairment:			Sources of Impairment:		
Cause Unknown - M			Natural - H		
Flow alteration - H			S		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH52 11</b>	<b>11-209</b>	<b>22.40</b>	<b>0.00</b>	County: <b>CLINTON CO</b>	
WB Name: <b>COWAN CREEK</b>				USEPA Reach Code: <b>05090202-021</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>22.40</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9609 to 9610</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>10.20</b>	Partial:	<b>3.80</b>
				None:	<b>0.00</b>
					Not Assessed: <b>8.40</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>10.2</b>	Fair: <b>3.8</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Stormwater runoff containing de-icing chemicals from Airborne Express may be causing impacts in Cowan Creek. The length of impact and the severity are not fully known at present.					
Causes of Impairment:			Sources of Impairment:		
Organic enrichment/DO - H			Industrial Permitted - H		
Nutrients - M			Pasture land - S		
Flow alteration - S			Natural - S		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH52 13</b>	<b>11-211</b>	<b>2.00</b>	<b>0.00</b>	County: <b>CLINTON CO</b>	
WB Name: <b>INDIAN RUN</b>				USEPA Reach Code: <b>05090202-085</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>2.00</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9609 to 9610</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>2.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream receives stormwater runoff from Airborne Express airport runways. The stream is a channelized ditch which is maintained regularly.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H			Channelization - H		
Siltation - M			Urban Runoff/Storm Sewers (NPS) - M		
Organic enrichment/DO - M					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH52 14</b>	<b>11-212</b>	<b>11.25</b>	<b>0.00</b>	County: <b>CLINTON CO</b>	
WB Name: <b>LYTLE CREEK</b>				USEPA Reach Code: <b>05090202-023</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>11.25</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9609 to 9610</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>2.20</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>9.10</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>2.2</b>	Fair: <b>0.0</b>	Poor: <b>9.1</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The upper 4.6 miles of this stream are impacted. The headwaters portion receives airport runway runoff containing de-icing chemicals. Nutrient enrichment from the Wilmington WWTP also affects the biological communities.					
Causes of Impairment:			Sources of Impairment:		
Unionized Ammonia - H			Industrial Permitted - H		
Organic enrichment/DO - H			Industrial Permitted - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH52 14</b>	<b>11-212</b>	<b>11.25</b>	<b>0.00</b>	County: <b>CLINTON CO</b>	
WB Name: <b>LYTLE CREEK</b>				USEPA Reach Code: <b>05090202-023</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>11.25</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9609 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>11.25</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>

**Comments:** The upper 4.6 miles of this stream are impacted. The headwaters portion receives airport runway runoff containing de-icing chemicals. Nutrient enrichment from the Wilmington WWTP also affects the biological communities.

Nutrients - M

Minor Municipal Point Source - M

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH52 14.1</b>	<b>11-218</b>	<b>2.19</b>	<b>0.00</b>	County:	
WB Name: <b>TRIB. TO LYTLE CREEK (RM 9.75)</b>				USEPA Reach Code:	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>2.19</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9609 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.10</b>	Not Assessed: <b>0.09</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>2.1</b>

**Comments:** This stream was devoid of fish. Severe impacts are caused by stormwater runoff containing de-icing chemicals from Airborne Express airport.

Causes of Impairment:

Sources of Impairment:

Flow alteration - M

Land development/Suburbanization - M

Unknown toxicity - H

Urban Runoff/Storm Sewers (NPS) - H

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH55 37</b>	<b>14-806</b>	<b>6.80</b>	<b>0.00</b>	County:	
WB Name: <b>NEW RICHLAND TRIBUTARY</b>				USEPA Reach Code: <b>05080001-</b>	
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>6.80</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9509 to 9509</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>6.80</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>6.8</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>

**Comments:** Two regional reference sites were sampled in 1995. Macroinvertebrate data indicate excellent quality near the mouth, and very good quality in the middle portion of the segment. Fish data from 1994 scored in the Exceptional Warmwater Habitat range at both sites.

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH55 43</b>	<b>14-802</b>	<b>14.95</b>	<b>0.00</b>	County:	
WB Name: <b>NORTH FORK GREAT MIAMI RIVER</b>				USEPA Reach Code: <b>05080001-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>14.95</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9509 to 9509</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>1.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>13.95</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>1.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Land use improvement projects within the Indian Lake watershed have improved the biological quality at the one regional reference site sampled on the North Fork in 1995. Macroinvertebrate data indicate good water quality.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH56 1</b>	<b>14-001</b>	<b>100.00</b>	<b>82.60</b>	County:	
WB Name: <b>GREAT MIAMI RIVER (LOST CREEK TO STILLWATER RIVER)</b>				USEPA Reach Code: <b>05080001-</b>	
Aquatic Life Use(s): <b>EWH, WWH</b>		Segment Length: <b>17.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9407 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>16.70</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.70</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>13.4</b>	Good: <b>3.3</b>	Fair: <b>0.7</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The 1994 study report recommended a change from Warmwater Habitat (WWH) to Exceptional Warmwater Habitat (EWH) from river miles 143.4 to 84.5. Partial attainment of WWH occurred due to flow alterations caused by the Steele Dam in Dayton (river miles 84.5 to 82.1).					
Causes of Impairment:			Sources of Impairment:		
Flow alteration - H		Dam construction - H			
Other habitat alterations - H		Hydromodification - H			

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH57 3</b>	<b>14-202</b>	<b>5.70</b>	<b>0.00</b>	County: <b>MONTGOMERY CO</b>	
WB Name: <b>MILL CREEK</b>				USEPA Reach Code: <b>05080001-086</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>5.70</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9508 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.60</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>3.80</b>	Not Assessed: <b>1.30</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.6</b>	Fair: <b>0.0</b>	Poor: <b>3.3</b>	Very Poor: <b>0.5</b>
<b>Comments:</b> Severe biological degradation associated with spills from the Dayton Airport retention basin is an ongoing problem. Biological results showed improvement since 1994, but complete recovery is contingent upon eliminating discharges from the retention basin. The stream channel upstream from the retention basin was re-directed, the result of airport expansion and improved de-icing facilities.					
Causes of Impairment:			Sources of Impairment:		
Unionized Ammonia - H		Spills - H			
Organic enrichment/DO - H		Channelization - S			
Other habitat alterations - S		Wastewater - H			

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH57 8</b>	<b>14-211</b>	<b>8.00</b>	<b>0.00</b>	County: <b>MIAMI CO</b>	
WB Name: <b>BRUSH CREEK</b>				USEPA Reach Code: <b>05080001-067</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>8.00</b>		Assessment Age: <b>Current</b>	
Assessment Cycle: <b>98</b> Data Collection Period: <b>9507 to 9509</b> Aquatic Life Use Attainment:					
Full:	Full, But Threatened:	Partial:	None:	Not Assessed:	
<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.00</b>	<b>0.00</b>	
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>0.0</b>	<b>1.0</b>	<b>7.0</b>	<b>0.0</b>
Comments: This stream is channelized for all but the lower 1 mile. Habitat modification is the major cause of non-attainment in the upper reaches. Nitrate levels are very high throughout the length of the stream. Though habitat is excellent near the mouth, nutrient enrichment from the upper reaches carries over and affects the biological community.					
Causes of Impairment:			Sources of Impairment:		
Nutrients - H			Nonirrigated crop production - H		
Other habitat alterations - H			Channelization - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH57 18</b>	<b>14-208</b>	<b>19.75</b>	<b>0.00</b>	County: <b>DARKE CO</b>	
WB Name: <b>PAINTER CREEK</b>				USEPA Reach Code: <b>05080001-060</b>	
Aquatic Life Use(s): <b>MWH-C, EWH</b>		Segment Length: <b>19.75</b>		Assessment Age: <b>Current</b>	
Assessment Cycle: <b>98</b> Data Collection Period: <b>9507 to 9509</b> Aquatic Life Use Attainment:					
Full:	Full, But Threatened:	Partial:	None:	Not Assessed:	
<b>4.75</b>	<b>0.00</b>	<b>0.00</b>	<b>15.00</b>	<b>0.00</b>	
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>4.7</b>	<b>1.3</b>	<b>13.7</b>	<b>0.0</b>
Comments: The entire length of stream in Darke County is under a stream maintenance program by the County Engineer. The lower 2 miles in Miami County is natural, flowing through a forested, bedrock area into the Stillwater River valley. Channelization highly influences the biological quality of the stream. Impacts were also documented related to the Arcanum WWTP. Good groundwater influx was noted in the headwaters. Sedimentation appears to be a problem in the middle portion of the basin.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H			Channelization - H		
Organic enrichment/DO - M			Natural - M		
Nutrients - M			Nonirrigated crop production - M		
			Minor Municipal Point Source - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH57 37</b>	<b>14-200</b>	<b>45.88</b>	<b>32.40</b>	County: <b>DARKE CO</b>	
WB Name: <i>STILLWATER RIVER (SWAMP CREEK TO GREENVILLE CREEK)</i>				USEPA Reach Code: <b>05080001-</b>	
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>13.50</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9509</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	Full, But Threatened:	Partial:	None:	Not Assessed:	
<b>13.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>13.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Comments:</b> The biological community is diverse and healthy. Turbidity and high nitrates are negative factors, but do not appear to be having impacts.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH57 38</b>	<b>14-218</b>	<b>9.10</b>	<b>0.00</b>	County: <b>DARKE CO</b>	
WB Name: <i>HARRIS CREEK</i>				USEPA Reach Code: <b>05080001-050</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>9.10</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9509</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	Full, But Threatened:	Partial:	None:	Not Assessed:	
<b>0.00</b>	<b>0.00</b>	<b>1.30</b>	<b>0.00</b>	<b>7.80</b>	
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>1.3</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Comments:</b> The fish community attains Warmwater Habitat, while the macroinvertebrates scored in the fair range. Cattle have direct access to the stream, and some riparian damage was noted. The middle and upper portions of the basin are channelized. Some residual effects may be present. The Bradford WWTP, located several miles upstream, apparently has little or no effect on this segment.					
<b>Causes of Impairment:</b>			<b>Sources of Impairment:</b>		
Nutrients - M			Nonirrigated crop production - H S		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH57 39</b>	<b>14-219</b>	<b>4.60</b>	<b>0.00</b>	County: <b>DARKE CO</b>	
WB Name: <i>BALLINGER RUN</i>				USEPA Reach Code: <b>05080001-062</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>4.60</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9509</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	Full, But Threatened:	Partial:	None:	Not Assessed:	
<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.60</b>	<b>0.00</b>	
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>0.0</b>	<b>4.6</b>	<b>0.0</b>	<b>0.0</b>
<b>Comments:</b> The entire length of this stream has been channelized in the past. The biological quality downstream from the Bradford WWTP improved significantly from previous sampling done in 1982. Upstream from the town of Bradford the stream had poor habitat, and was heavily silted from agricultural runoff.					
<b>Causes of Impairment:</b>			<b>Sources of Impairment:</b>		
Nutrients - H Other habitat alterations - H Siltation - H			Channelization - H Nonirrigated crop production - H Minor Municipal Point Source - M		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH57 40</b>	<b>14-234</b>	<b>4.80</b>	<b>0.00</b>	County:	<b>MIAMI CO</b>
WB Name: <b>TROTTERS CREEK</b>				USEPA	<b>05080001-</b>
Aquatic Life Use(s): <b>WWH</b>				Reach Code:	<b>05080001-</b>
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9509</b>	Assessment Age: <b>Current</b>		
Aquatic Life Use Attainment:					
Full:	<b>4.80</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>4.8</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The fish and macroinvertebrate communities were both in attainment of WWH criteria. Nutrients in the water column were relatively high, but apparently not significantly affecting the biological communities.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH57 41</b>	<b>14-235</b>	<b>13.80</b>	<b>0.00</b>	County:	<b>DARKE CO</b>
WB Name: <b>SWAMP CREEK</b>				USEPA	<b>05080001-044</b>
Aquatic Life Use(s): <b>MWH-C, WWH</b>				Reach Code:	<b>05080001-044</b>
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9509</b>	Assessment Age: <b>Current</b>		
Aquatic Life Use Attainment:					
Full:	<b>13.80</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>13.8</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The entire length of the stream has been channelized in the past. The upper reaches are maintained regularly. The lower portion has riparian which is intact. The biological community appears to be healthy. Nutrients in the water column were somewhat elevated. Improvement was noted in IBI scores compared to sampling done in previous years.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH57 42</b>	<b>14-236</b>	<b>5.20</b>	<b>0.00</b>	County:	<b>DARKE CO</b>
WB Name: <b>INDIAN CREEK</b>				USEPA	<b>05080001-</b>
Aquatic Life Use(s): <b>WWH</b>				Reach Code:	<b>05080001-</b>
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9509</b>	Assessment Age: <b>Current</b>		
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>4.85</b>
					Not Assessed: <b>0.35</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>4.8</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> A major fish kill occurred from fertilizer runoff in August, 1995. The stream was meeting Warmwater Habitat criteria before the spill. One month after the spill fish were present, but the IBI score was in the poor range. Habitat and flow are sufficient that full recovery will probably occur in the near future. Future monitoring is recommended as a follow-up to the fish kill.					
Causes of Impairment:			Sources of Impairment:		
Other inorganics - H			Spills - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH57 45</b>	<b>14-200</b>	<b>67.64</b>	<b>57.97</b>	County: <b>DARKE CO</b>	
WB Name: <i>STILLWATER RIVER (HEADWATERS TO NORTH FORK)</i>				USEPA Reach Code: <b>05080001-048</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>9.67</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9509</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	Full, But Threatened:	Partial:	None:	Not Assessed:	
<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.67</b>	<b>0.00</b>	
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>0.0</b>	<b>9.6</b>	<b>0.0</b>	<b>0.0</b>
<b>Comments:</b> Habitat was marginally good, but showed effects of past channelization. Very high nitrates were present in the water column. The fish community scored in the fair range.					
Causes of Impairment:			Sources of Impairment:		
Nutrients - M			Channelization - M		
Other habitat alterations - H			Nonirrigated crop production - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH57 48</b>	<b>14-240</b>	<b>3.50</b>	<b>0.00</b>	County: <b>DARKE CO</b>	
WB Name: <i>SOUTH FORK STILLWATER RIVER</i>				USEPA Reach Code: <b>05080001-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>3.50</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9509</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	Full, But Threatened:	Partial:	None:	Not Assessed:	
<b>3.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>3.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Comments:</b> This stream scored exceptionally well considering it is a channelized ditch with poor habitat. Nutrients in the water column were high.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH59 1</b>	<b>14-500</b>	<b>6.70</b>	<b>0.00</b>	County: <b>MONTGOMERY CO</b>	
WB Name: <i>TWIN CREEK (LITTLE TWIN CREEK TO GREAT MIAMI R.)</i>				USEPA Reach Code: <b>05080002-015</b>	
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>6.70</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	Full, But Threatened:	Partial:	None:	Not Assessed:	
<b>6.70</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>6.7</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Comments:</b> This segment is in full attainment of Exceptional Warmwater Habitat criteria.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH59 2</b>	<b>14-501</b>	<b>7.80</b>	<b>0.00</b>	County: <b>MONTGOMERY CO</b>	
WB Name: <b>LITTLE TWIN CREEK</b>				USEPA Reach Code: <b>05080002-016</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>7.80</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>6.80</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>1.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>6.8</b>	Good: <b>1.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: This segment is recommended for upgrade to the use designation Exceptional Warmwater Habitat. There were slight impacts downstream from the confluence of Reigle Ditch, which the Farmersville WWTP discharges to.			Sources of Impairment:		
Causes of Impairment: Nutrients - H			Municipal Point Sources - H Agriculture - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH59 2.1</b>	<b>14-516</b>	<b>4.66</b>	<b>0.00</b>	County: <b>MONTGOMERY CO</b>	
WB Name: <b>REIGLE DITCH</b>				USEPA Reach Code: <b>05080002-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>4.66</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>4.66</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>4.6</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: The Farmersville WWTP discharges to this segment. Some influences from elevated nutrients were observed, but the segment fully attains Warmwater Habitat criteria.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH59 3</b>	<b>14-500</b>	<b>24.30</b>	<b>6.70</b>	County:	
WB Name: <b>TWIN CREEK (BANTAS FORK TO LITTLE TWIN CREEK)</b>				USEPA Reach Code: <b>05080002-</b>	
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>17.60</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>17.60</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>17.6</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: This segment is in full attainment of Exceptional Warmwater Habitat criteria. The Gratis WWTP has little to no impact on the stream.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH59 4</b>	<b>14-502</b>	<b>15.40</b>	<b>0.00</b>	County:	
WB Name: <b>TOMS RUN</b>				USEPA	
Aquatic Life Use(s): <b>WWH</b>				Reach Code:	<b>05080002-018</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9507 to 9510</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>6.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>9.40</b>
				None:	<b>0.00</b>
					Not Assessed:
					<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>6.0</b>	<b>0.0</b>	<b>9.4</b>	<b>0.0</b>	<b>0.0</b>
Comments: The lower portion of this segment has natural habitat and a high quality biological community. The upper reaches are impacted by agricultural runoff.					
Causes of Impairment:			Sources of Impairment:		
Nutrients - H			Agriculture - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH59 6</b>	<b>14-504</b>	<b>5.60</b>	<b>0.00</b>	County:	
WB Name: <b>AUKERMAN CREEK</b>				USEPA	
Aquatic Life Use(s): <b>WWH</b>				Reach Code:	<b>05080002-039</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9507 to 9510</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>5.60</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed:
					<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>5.6</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Comments: Some influences from agricultural land use were evident, but the segment still attains Warmwater Habitat criteria.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH59 7</b>	<b>14-505</b>	<b>16.80</b>	<b>0.00</b>	County:	<b>PREBLE CO</b>
WB Name: <b>BANTAS FORK</b>				USEPA	
Aquatic Life Use(s): <b>EWH</b>				Reach Code:	<b>05080002-</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9507 to 9510</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>16.80</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed:
					<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>16.8</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Comments: This stream is in full attainment of Exceptional Warmwater Habitat criteria.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH59 8</b>	<b>14-506</b>	<b>5.10</b>	<b>0.00</b>	County: <b>PREBLE CO</b>	
WB Name: <b>GOOSE RUN</b>				USEPA Reach Code: <b>05080002-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>5.10</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>0.35</b>	Full, But Threatened: <b>4.75</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>3.0</b>	Good: <b>2.1</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: It is recommended that the lower 3.0 miles be upgraded to the use designation Exceptional Warmwater Habitat. The upper reaches have potential threats from 2 small WWTPs at truck stops on Interstate 70.			Sources of Impairment:		
Causes of Impairment: Organic enrichment/DO - T			Minor Industrial Point Source - T		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH59 10</b>	<b>14-500</b>	<b>29.70</b>	<b>24.30</b>	County: <b>PREBLE CO</b>	
WB Name: <b>TWIN CREEK (PRICE CREEK TO BANTAS FORK)</b>				USEPA Reach Code: <b>05080002-020</b>	
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>5.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>4.30</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>1.10</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>4.3</b>	Good: <b>1.1</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: Runoff from agricultural sources was the main cause of partial attainment of Exceptional Warmwater Habitat in this segment.			Sources of Impairment:		
Causes of Impairment: Nutrients - H			Agriculture - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH59 11</b>	<b>14-508</b>	<b>8.50</b>	<b>0.00</b>	County: <b>PREBLE CO</b>	
WB Name: <b>LESLEY RUN</b>				USEPA Reach Code: <b>05080002-059</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>8.50</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>6.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>2.50</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>6.0</b>	Fair: <b>2.5</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: The upper reaches of this segment are impacted by agricultural runoff.			Sources of Impairment:		
Causes of Impairment: Nutrients - H			Agriculture - H		



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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH59 17</b>	<b>14-513</b>	<b>10.60</b>	<b>0.00</b>	County:	
WB Name: <b>MILLERS FORK</b>				USEPA Reach Code: <b>05080002-021</b>	
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>10.60</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>8.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.60</b>	None: <b>2.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>8.0</b>	Good: <b>0.6</b>	Fair: <b>2.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Golf course development which had no erosion controls impacted approximately 2 miles of this segment due to siltation.					
Causes of Impairment:			Sources of Impairment:		
Siltation - H			Construction - H		
Land development/Suburbanization - H					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH60 1</b>	<b>14-001</b>	<b>38.38</b>	<b>26.60</b>	County:	
WB Name: <b>GREAT MIAMI RIVER (FOURMILE CREEK TO RM 26.6)</b>				USEPA Reach Code: <b>05080002-005</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>11.78</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>5.50</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>6.28</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>2.9</b>	Fair: <b>8.8</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> From river mile 38.4 to 26.3 the macroinvertebrate community was very good to exceptional, and fair to exceptional for the fish community. Partial attainment of Warmwater Habitat criteria occurred from river miles 38.4 to 36.9 due to flow alterations caused by the Hamilton Municipal power dam. Partial attainment also occurred downstream from the Hamilton WWTP and combined sewer overflows in Hamilton, and downstream from the Fairfield WWTP. Both WWTPs had numerous NPDES violations. Slightly to moderately elevated levels of PCBs were detected in fish tissue fillet samples.					
Causes of Impairment:			Sources of Impairment:		
Nutrients - H			Combined Sewer Overflow - H		
Organic enrichment/DO - M			Combined Sewer Overflow - M		
Flow alteration - M			Dam construction - M		
Municipal Point Sources - H					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH60 2</b>	<b>14-010</b>	<b>22.90</b>	<b>0.00</b>	County: <b>BUTLER CO</b>	
WB Name: <b>INDIAN CREEK</b>				USEPA Reach Code: <b>05080002-034</b>	
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>22.90</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9608</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>22.90</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>22.9</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Three regional reference sites were sampled on this stream in 1996. The site upstream from Millville showed a modest decline in the fish community compared to sampling done in 1985. The two sites downstream from the Queen Acres WWTP have remained stable since 1983.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH60 9</b>	<b>14-001</b>	<b>47.60</b>	<b>38.40</b>	County: <b>BUTLER CO</b>	
WB Name: <b>GREAT MIAMI RIVER (DICKS CREEK TO FOURMILE CREEK)</b>				USEPA Reach Code: <b>05080002-006</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>9.20</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>1.85</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>7.35</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>1.8</b>	Fair: <b>7.3</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Partial attainment of Warmwater Habitat criteria occurred due to flow alterations caused by the Hamilton Municipal Power dam (river mile 39.0). Fish community scores were below expectation downstream from the Butler County Lesourdesville WWTP (river mile 45.5). This corresponds to increased loadings of ammonia, total suspended solids, and CBOD5 between 1993 and 1995. The Lesourdesville WWTP was the second highest contributor of ammonia of all the dischargers evaluated in the 1995 survey. Inconsistency in effluent loadings should decline in the near future due to recent upgrades at the plant. Slightly elevated PCBs were detected in fish tissue fillet samples at river mile 38.5.					
Causes of Impairment:			Sources of Impairment:		
Nutrients - H		Municipal Point Sources - H			
Flow alteration - H		Dam construction - H			
Organic enrichment/DO - M		Major Municipal Point Source - M			
Pesticides - M					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH60 14</b>	<b>14-018</b>	<b>10.50</b>	<b>0.00</b>	County:	<b>BUTLER CO</b>
WB Name: <b>DICKS CREEK</b>				USEPA Reach Code:	<b>05080002-</b>
Aquatic Life Use(s): <b>WWH, MWH-C, WWH</b>		Segment Length: <b>10.50</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>5.20</b>	Not Assessed: <b>5.30</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>5.2</b>

**Comments:** Aquatic life use status in this segment has declined since 1987. Fish and macroinvertebrate communities were both in the poor range. The macroinvertebrates were severely impacted by several outfalls from AK Steel. AK Steel has had numerous violations of its NPDES permit, as well as spills which have caused fish kills. Nonpoint source runoff is also present, originating from a concrete company and numerous landfills.

Causes of Impairment:

Sources of Impairment:

- pH - H
- Metals - H
- Unknown toxicity - M
- Unionized Ammonia - H
- Selenium - H
- Priority organics - H
- Copper - M
- Zinc - M
- Lead - M
- Suspended solids - H

- Industrial Point Sources - H
- Spills - H
- Landfills - M
- Industrial Point Sources - M
- Combined Sewer Overflow - H

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH60 17</b>	<b>14-019</b>	<b>5.60</b>	<b>0.00</b>	County:	<b>BUTLER CO</b>
WB Name: <b>NORTH BRANCH DICKS CREEK</b>				USEPA Reach Code:	<b>05080002-</b>
Aquatic Life Use(s): <b>WWH, MWH-C</b>		Segment Length: <b>5.60</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>1.00</b>	Not Assessed: <b>4.60</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>1.0</b>

**Comments:** The 1995 survey results indicated non-attainment of the Modified Warmwater Habitat (MWH) criteria due to very poor macroinvertebrate scores. The macroinvertebrates were severely impacted by the AK Steel 004 outfall, indicating toxicity in the effluent. The community was also impacted upstream from the 004 discharge, most likely a response to organic enrichment from urban runoff.

Causes of Impairment:

Sources of Impairment:

- Metals - H
- Organic enrichment/DO - H
- pH - H
- Copper - H
- Zinc - H
- Selenium - H
- Nickel - H
- Suspended solids - M
- Organic enrichment/DO - H

- Industrial Point Sources - H
- Urban Runoff/Storm Sewers (NPS) - H

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH60 18</b>	<b>14-001</b>	<b>57.42</b>	<b>47.60</b>	County:	<b>BUTLER CO</b>
WB Name: <b>GREAT MIAMI RIVER (TWIN CREEK TO DICKS CREEK)</b>				USEPA	
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>9.82</b>	Reach Code:	<b>05080002-007</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9507 to 9510</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>5.62</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>3.80</b>
				None:	<b>0.40</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.6</b>	Fair: <b>4.2</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>

**Comments:** Non-attainment of WWH criteria occurred due to flow alterations caused by the Middletown dam. Biological scores declined downstream from AK Steel (river mile 51.4), possibly due to elevated levels of PAHs, heavy metals in the sediments, and organic enrichment from combined sewer overflows in Middletown. Slightly elevated levels of PCBs were detected in several fish tissue fillet samples.

Causes of Impairment:

- Organic enrichment/DO - H
- Priority organics - M
- Copper - M
- Iron - M
- Chromium - M
- Arsenic - M
- Cadmium - M
- Lead - M
- Mercury - M
- Zinc - M
- Organic enrichment/DO - M
- Other habitat alterations - M

Sources of Impairment:

- Dam construction - H
- Removal of riparian vegetation - H
- Major Industrial Point Source - H
- Combined Sewer Overflow - H
- Removal of riparian vegetation - H

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH60 19</b>	<b>14-022</b>	<b>12.60</b>	<b>0.00</b>	County:	<b>BUTLER CO</b>
WB Name: <b>ELK CREEK</b>				USEPA	
Aquatic Life Use(s):	<b>EWH</b>	Segment Length:	<b>12.60</b>	Reach Code:	<b>05080002-024</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9507 to 9510</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>12.60</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>12.6</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>

**Comments:** The macroinvertebrate community was attaining Exceptional Warmwater Habitat criteria. The fish community IBI scores were non-significant departure from EWH criteria. Water quality appears to be good to very good. However, large amounts of filamentous algae in the stream channel indicated nutrient enrichment. Supplemental fish data collected by a Miami University student indicate good biological quality in the headwaters.

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:		
<b>OH60 19.1</b>	<b>14-176</b>	<b>4.64</b>	<b>0.00</b>		Ecoregion: <b>ECBP</b> County: <b>BUTLER CO</b> USEPA Reach Code: <b>05080002-</b>
WB Name: <i>DRY CREEK</i>					
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>4.64</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.60</b>
					Not Assessed: <b>4.04</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.6</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: The macroinvertebrate community scored in the fair range, primarily due to low flow conditions. Causes of Impairment: Flow alteration - H Sources of Impairment: Natural - H					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:		
<b>OH60 21</b>	<b>14-001</b>	<b>67.60</b>	<b>57.42</b>		Ecoregion: <b>ECBP</b> County: USEPA Reach Code: <b>05080002-008</b>
WB Name: <i>GREAT MIAMI RIVER (BEAR CREEK TO TWIN CREEK)</i>					
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>10.18</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>8.58</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>1.60</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>8.5</b>	Fair: <b>1.6</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: Partial attainment of Warmwater Habitat criteria occurred due to flow alterations from the Dayton Power & Light dam. Slightly elevated levels of PCBs were found in fish tissue fillet samples. Causes of Impairment: Flow alteration - H Other habitat alterations - H Nutrients - M Sources of Impairment: Dam construction - H Hydromodification - H Major Municipal Point Source - M					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:		
<b>OH60 21.1</b>	<b>14-171</b>	<b>0.50</b>	<b>0.00</b>		Ecoregion: <b>ECBP</b> County: <b>MONTGOMERY CO</b> USEPA Reach Code: <b>05080002-</b>
WB Name: <i>MOUND OVERFLOW CREEK</i>					
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>0.50</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.50</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.5</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: The fish and macroinvertebrate community performed in the fair range. The 1995 report recommended that the Mound overflow creek should be designated as Modified Warmwater Habitat (MWH) due to the modified nature of the channel. These modifications include channelization, impoundment (Great Miami River backwaters), and flow comprised partly of effluent from the Mound 002 outfall. Causes of Impairment: Flow alteration - H Other habitat alterations - H Sources of Impairment: Industrial Permitted - H Channelization - H					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH60 27</b>	<b>14-029</b>	<b>14.40</b>	<b>0.00</b>	County: <b>MONTGOMERY CO</b>	
WB Name: <b>BEAR CREEK</b>				USEPA Reach Code: <b>05080002-014</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>14.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>9.60</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>4.80</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>9.6</b>	Fair: <b>4.8</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> The fish community was exceptional upstream and downstream from the New Lebanon WWTP (river miles 12.1 and 9.9). However, the WWTP was significantly impacting the macroinvertebrate community. Based on these results, the upper portion of Bear Creek was only achieving partial attainment of Warmwater Habitat criteria . The macroinvertebrate community improved at the two most downstream sites into the range of good to exceptional. The fish declined from exceptional to fair and poor. This correlates to the decline in habitat scores (QHEI of only 46 near the mouth).</p> <p>Causes of Impairment: Other habitat alterations - H Organic enrichment/DO - H</p> <p>Sources of Impairment: Removal of riparian vegetation - H Channelization - H Municipal Point Sources - H</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH60 33</b>	<b>14-001</b>	<b>80.20</b>	<b>67.60</b>	County: <b>MONTGOMERY CO</b>	
WB Name: <b>GREAT MIAMI RIVER (WOLF CREEK TO BEAR CREEK)</b>				USEPA Reach Code: <b>05080002-009</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>12.60</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>9.90</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>1.20</b>	None: <b>1.50</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>9.9</b>	Fair: <b>2.7</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> This segment of river receives discharges from WWTPs and industrial point sources. Partial attainment of Warmwater Habitat criteria resulted from flow alterations caused by the West Carrollton dam, from river mile 75.0 to 72.5. Nutrient problems within the dam pool resulted in low dissolved oxygen levels, and a high number of DELT anomalies in the fish. The river appeared to be impacted by discharges from a paper company on Owl Creek (very low D.O. and toxicity were found in Owl Creek). There may be cumulative impacts from Appleton Paper and Montgomery County WWTP. Slightly to moderately elevated levels of PCBs were found in the fish tissue fillet samples.</p> <p>Causes of Impairment: Nutrients - H Organic enrichment/DO - H Flow alteration - H Other habitat alterations - H Priority organics - H Pesticides - M</p> <p>Sources of Impairment: Dam construction - H Hydromodification - H Major Industrial Point Source - H Major Municipal Point Source - H</p>					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH60 33.1</b>	<b>14-089</b>	<b>3.33</b>	<b>0.00</b>	County: <b>MONTGOMERY CO</b>	
WB Name: <b>OWL CREEK</b>				USEPA Reach Code: <b>05080002-</b>	
Aquatic Life Use(s): <b>LRW</b>		Segment Length: <b>3.33</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.50</b>	None: <b>0.00</b>	Not Assessed: <b>2.83</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.5</b>
<b>Comments:</b> Miami Paper Co. and West Carrollton Parchment are both located in this segment. The fish community was marginally good. The macroinvertebrates however, were severely impaired, indicating instream toxicity.					
Causes of Impairment:			Sources of Impairment:		
Priority organics - H			Major Industrial Point Source - H		
Other inorganics - H					
Chromium - S					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH60 35</b>	<b>14-036</b>	<b>9.00</b>	<b>0.00</b>	County: <b>MONTGOMERY CO</b>	
WB Name: <b>HOLES CREEK</b>				USEPA Reach Code: <b>05080002-058</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>9.00</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>3.70</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>1.90</b>	Not Assessed: <b>3.40</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>3.7</b>	Fair: <b>1.9</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream scored in the fair range throughout most of its length. Impacts are caused by several sources including storm sewer runoff, disruption of substrates from sewer line construction, excessive sedimentation, and embeddedness of the substrates.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H			Highway/road/bridge/sewer line - H		
Siltation - H			Urban Runoff/Storm Sewers (NPS) - H		
Nutrients - H					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH60 36</b>	<b>14-037</b>	<b>19.30</b>	<b>0.00</b>	County: <b>MONTGOMERY CO</b>	
WB Name: <b>WOLF CREEK</b>				USEPA Reach Code: <b>05080002-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>19.30</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.20</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>14.50</b>
				None:	<b>4.60</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.2</b>	Fair: <b>14.5</b>	Poor: <b>4.6</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> This segment is impacted by the Brookville WWTP as well as urban and stormwater runoff. A city dump is also located in this segment. The stream has significantly improved since 1987 when no fish were found downstream from the Brookville WWTP. Heavy sludge deposits were recorded in 1987. Sludge deposits were still present in 1995, although not as excessive as in earlier years. Non-attainment downstream from the Brookville WWTP was due to the poor macroinvertebrate community.</p> <p>Causes of Impairment:</p> <ul style="list-style-type: none"> <li>Flow alteration - S</li> <li>Pesticides - H</li> <li>Priority organics - H</li> <li>Nutrients - H</li> </ul> <p>Sources of Impairment:</p> <ul style="list-style-type: none"> <li>Natural - S</li> <li>Highway maintenance and runoff - H</li> <li>Urban Runoff/Storm Sewers (NPS) - H</li> <li>Municipal Point Sources - H</li> </ul>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH60 37</b>	<b>14-038</b>	<b>3.20</b>	<b>0.00</b>	County: <b>MONTGOMERY CO</b>	
WB Name: <b>DRY RUN</b>				USEPA Reach Code: <b>05080002-053</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>3.20</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>3.20</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>3.2</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> The quality of this stream appears to be very good. The fish community scored in the exceptional range near the mouth.</p>					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH60 41</b>	<b>14-001</b>	<b>82.60</b>	<b>80.20</b>	
WB Name: <i>GREAT MIAMI RIVER (STILLWATER RIVER TO WOLF CREEK)</i>				
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>2.40</b>		
Ecoregion: <b>ECBP</b> County: <b>MONTGOMERY CO</b> USEPA Reach Code: <b>05080002-</b>				

Assessment Cycle: **98**      Data Collection Period: **9507 to 9510**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full: <b>1.90</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.50</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>1.9</b>	Fair: <b>0.5</b>	Poor: <b>0.0</b>
				Very Poor: <b>0.0</b>

**Comments:** Partial attainment of Warmwater Habitat criteria occurred from river mile 82.6 to 82.1 due to flow alterations caused by the Steele Dam in Dayton. This section of river flows through urbanized areas of Dayton. Fish results indicate good to fair quality of water.

Causes of Impairment:

Flow alteration - H  
 Other habitat alterations - H

Sources of Impairment:

Dam construction - H  
 Hydromodification - H

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH61 11</b>	<b>14-400</b>	<b>3.74</b>	<b>0.00</b>	
WB Name: <i>FOURMILE CREEK (SEVENMILE CREEK TO GREAT MIAMI R.)</i>				
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>3.74</b>		
Ecoregion: <b>ECBP</b> County: <b>BUTLER CO</b> USEPA Reach Code: <b>05080002-025</b>				

Assessment Cycle: **98**      Data Collection Period: **9605 to 9610**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full: <b>0.00</b>	Full, But Threatened: <b>3.74</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>3.3</b>	Good: <b>0.3</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>
				Very Poor: <b>0.0</b>

**Comments:** This segment meets Warmwater Habitat criteria. The lower 0.3 miles is impounded from a dam on the Great Miami River.

Causes of Impairment:

Pesticides - T  
 Organic enrichment/DO - T  
 Flow alteration - T

Sources of Impairment:

Agriculture - T  
 Dam construction - T

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH61 24</b>	<b>14-400</b>	<b>23.90</b>	<b>3.74</b>	
WB Name: <i>FOURMILE CREEK (L. FOURMILE CR. TO SEVENMILE CR.)</i>				
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>20.16</b>		
Ecoregion: <b>ECBP</b> County: USEPA Reach Code: <b>05080002-031</b>				

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Assessment Cycle: **98**      Data Collection Period: **9605 to 9610**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>10.00</b>	Full, But Threatened:	<b>8.18</b>	Partial:	<b>1.98</b>	None:	<b>0.00</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent: <b>10.2</b>	Good: <b>7.9</b>	Fair: <b>0.4</b>	Poor: <b>1.5</b>	Very Poor: <b>0.0</b>				

**Comments:** Some impact was caused by hypolimnetic water releases from Acton Lake. Low dissolved oxygen and high ammonia affected macroinvertebrate populations upstream from the Oxford WWTP. Partial attainment of Warmwater Habitat occurred downstream from the Oxford WWTP. High total suspended solids, CBOD5 and copper were recorded. Sewer overflows and bypasses also affect the stream.

Causes of Impairment:

- Organic enrichment/DO - T
- Unionized Ammonia - M
- Organic enrichment/DO - H
- Pesticides - T
- Flow alteration - T
- Total toxics - T
- Suspended solids - H
- Total toxics - M
- Copper - S

Sources of Impairment:

- Agriculture - T
- Upstream impoundment - H
- Agriculture - H
- Upstream impoundment - T
- Hydromodification - T
- Urban Runoff/Storm Sewers (NPS) - T
- Major Municipal Point Source - H
- Urban Runoff/Storm Sewers (NPS) - M
- Major Municipal Point Source - T
- Dam construction - T

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>
<b>OH61 28</b>	<b>14-423</b>	<b>2.68</b>	<b>0.00</b>	County: <b>BUTLER CO</b>
WB Name: <b>ELAMS RUN</b>				USEPA Reach Code: <b>05080002-</b>
Aquatic Life Use(s): <b>LRW</b>		Segment Length: <b>2.68</b>		

Assessment Cycle: **98**      Data Collection Period: **9606 to 9609**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>1.55</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>	None:	<b>0.61</b>	Not Assessed:	<b>0.52</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>1.5</b>	Fair: <b>0.2</b>	Poor: <b>0.2</b>	Very Poor: <b>0.2</b>				

**Comments:** Water quality in this segment is affected by Square D. Ammonia and metals toxicity affect the biological communities. The fish and macroinvertebrate communities recover near the mouth to the ranges of good to very good. Elams Run has no apparent effect on the biological communities in Fourmile Creek.

Causes of Impairment:

- Unionized Ammonia - H
- Metals - M

Sources of Impairment:

- Major Industrial Point Source - H

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH61 31</b>	<b>14-400</b>	<b>38.20</b>	<b>23.90</b>	County:	
WB Name: <i>FOURMILE CREEK (HEADWATERS TO LITTLE FOURMILE CR.)</i>					
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>14.30</b>		USEPA Reach Code: <b>05080002-</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>14.30</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>14.3</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Poor agricultural practices and riparian encroachment are two main problems in this segment. Violations of Aldrin and Dieldrin were recorded. Erosion and streambank slumping are occurring in places.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - T			Agriculture - T		
Siltation - T			Streambank modification/destabilization - T		
Pesticides - T			Removal of riparian vegetation - T		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>IP</b>	
<b>OH62 1</b>	<b>14-001</b>	<b>15.00</b>	<b>0.00</b>	County: <b>HAMILTON CO</b>	
WB Name: <i>GREAT MIAMI RIVER (TAYLOR CREEK TO OHIO RIVER)</i>					
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>15.00</b>		USEPA Reach Code: <b>05080002-</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>9.20</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>3.70</b>	None: <b>2.10</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>9.2</b>	Fair: <b>5.8</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The Taylor Creek Regional WWTP began discharging in 1996. Future monitoring is recommended to determine if the biological community is impacted. Partial attainment and non-attainment of Warmwater Habitat criteria occurred near the mouth due to impounded conditions caused by the backwaters of the Ohio River (Markland Dam pool).					
Causes of Impairment:			Sources of Impairment:		
Flow alteration - H			Hydromodification - H		
Nutrients - M			Dam construction - H		
Priority organics - M			Major Municipal Point Source - M		
			Urban Runoff/Storm Sewers (NPS) - M		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:		
<b>OH62 3</b>	<b>14-300</b>	<b>8.26</b>	<b>0.00</b>		Ecoregion: <b>IP</b> County: <b>HAMILTON CO</b> USEPA Reach Code: <b>05080003-</b>
WB Name: <i>WHITEWATER RIVER (OHIO/INDIANA TO GREAT MIAMI R.)</i>					
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>8.26</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>8.26</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>8.2</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The 1995 study report recommended a change from Warmwater Habitat (WWH) to Exceptional Warmwater Habitat (EWH) for this segment. The fish and macroinvertebrates communities were both indicative of exceptional quality. The Harrison WWTP had no impact on the biological community.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:		
<b>OH62 5</b>	<b>14-302</b>	<b>19.60</b>	<b>0.00</b>		Ecoregion: <b>IP</b> County: USEPA Reach Code: <b>05080003-002</b>
WB Name: <i>DRY FORK WHITEWATER RIVER</i>					
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>19.60</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9606 to 9609</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>8.60</b>	Full, But Threatened:	<b>11.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>4.3</b>	Good: <b>15.3</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream was originally designated Exceptional Warmwater Habitat (EWH) in 1978 without any field data to verify it. The 1996 assessment showed that the stream is indicative of Warmwater Habitat (WWH). Interstitial flow conditions during the summer months is a limiting factor for the fish community. Past and recent channelization affect the habitat in some sections of the stream. Some agricultural nonpoint source influences could threaten water quality in the lower 11 miles.					
Causes of Impairment: Other habitat alterations - T Siltation - T Nutrients - T			Sources of Impairment: Agriculture - T Channelization - T Removal of riparian vegetation - T Streambank modification/destabilization - T		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>IP</b>	
<b>OH62 13</b>	<b>14-001</b>	<b>26.60</b>	<b>14.98</b>	County: <b>HAMILTON CO</b>	
WB Name: <b>GREAT MIAMI RIVER (RM 26.6 TO TAYLOR CREEK)</b>				USEPA Reach Code: <b>05080002-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>11.62</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>11.62</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>11.6</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The aquatic communities from river mile 26.6 to 15.0 were in the very good range (macroinvertebrates) and fair range (fish). The fish scores were significantly below regional expectations, falling into partial attainment of Warmwater Habitat criteria. No pesticides or PCBs were detected in the sediments. Mercury, Dieldrin, and gamma-Hexachlorocyclohexane were detected in the water column.					
Causes of Impairment:			Sources of Impairment:		
Organic enrichment/DO - H			Major Municipal Point Source - H		
Nutrients - H			Minor Municipal Point Source - H		
Other habitat alterations - S			Dredging - S		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH62 14</b>	<b>14-005</b>	<b>8.80</b>	<b>0.00</b>	County:	
WB Name: <b>PADDY'S RUN</b>				USEPA Reach Code: <b>05080002-064</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>8.80</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>2.10</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>2.80</b>
					Not Assessed: <b>3.90</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>2.1</b>	Fair: <b>0.2</b>	Poor: <b>2.6</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Macroinvertebrate scores were in the fair range upstream from the D.O.E. Fernald 006 outfall (river mile 4.9). This was most likely caused by low flow conditions and/or nonpoint sources of pollution. The fish community scored poor to very poor at two sites downstream from the outfall. This was a result of intermittent or totally dry stream conditions. Based on the 1995 study, the D.O.E. Fernald outfall did not impact the biological community. Natural, low flow conditions were the contributing cause of degradation in both the fish and macroinvertebrate communities.					
Causes of Impairment:			Sources of Impairment:		
Flow alteration - H			Natural - H		
Organic enrichment/DO - M			Urban Runoff/Storm Sewers (NPS) - M		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>IP</b>	
<b>OH62 15</b>	<b>14-006</b>	<b>3.00</b>	<b>0.00</b>	County: <b>HAMILTON CO</b>	
WB Name: <b>BLUEROCK CREEK</b>				USEPA Reach Code: <b>05080002-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>3.00</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9607</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.50</b>	Not Assessed: <b>2.50</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.5</b>	Very Poor: <b>0.0</b>
Comments: The city of Cincinnati is undergoing much development. Causes of Impairment: Cause Unknown - H			Sources of Impairment: Land development/Suburbanization - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>IP</b>	
<b>OH62 19.1</b>	<b>23-019</b>	<b>3.26</b>	<b>0.00</b>	County: <b>HAMILTON CO</b>	
WB Name: <b>INDIAN CREEK</b>				USEPA Reach Code: <b>05090203-</b>	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>3.26</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9607</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>3.26</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>3.2</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: This is a high gradient, small drainage area stream which is intermittent at times of the year. Residential development is occurring within the basin. Causes of Impairment: Flow alteration - H			Sources of Impairment: Natural - H Land development/Suburbanization - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>IP</b>	
<b>OH62 19.2</b>	<b>23-020</b>	<b>1.18</b>	<b>0.00</b>	County: <b>HAMILTON CO</b>	
WB Name: <b>TRIB. TO INDIAN CREEK (RM 1.02)</b>				USEPA Reach Code: <b>05090203-</b>	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>1.18</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9606</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>1.18</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.3</b>	Poor: <b>0.0</b>	Very Poor: <b>0.8</b>
Comments: This is a high gradient, small drainage area stream which is intermittent at times of the year. Residential development is occurring within the basin. Causes of Impairment: Flow alteration - H			Sources of Impairment: Natural - H Land development/Suburbanization - M		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH64 12</b>	<b>04-510</b>	<b>13.40</b>	<b>0.00</b>	County: <b>MERCER CO</b>	
WB Name: <b>TWELVEMILE CREEK</b>				USEPA Reach Code: <b>04100004-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>13.40</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9609 to 9610</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>2.20</b>
				None:	<b>0.00</b>
					Not Assessed: <b>11.20</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.2</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> One regional reference site was sampled near the mouth. The fish community has remained stable since 1983, but is below ecoregional expectations. The macroinvertebrates were rated good based on qualitative sampling results.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H Siltation - M			Channelization - H Nonirrigated crop production - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH64 30</b>	<b>04-518</b>	<b>12.30</b>	<b>0.00</b>	County: <b>AUGLAIZE CO</b>	
WB Name: <b>CENTER BRANCH</b>				USEPA Reach Code: <b>04100004-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>12.30</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9607 to 9607</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>12.30</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>12.3</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment is channelized. The IBI results in 1996 were significantly lower than sampling done in 1987. The cause for the decline is unknown. The macroinvertebrates were rated good based on qualitative sampling results.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H Cause Unknown - S			Channelization - H Source Unknown - S		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH65 6</b>	<b>04-052</b>	<b>8.36</b>	<b>0.00</b>	County: <b>DEFIANCE CO</b>	
WB Name: <b>GORDON CREEK</b>				USEPA Reach Code: <b>04100005-002</b>	
Aquatic Life Use(s): <b>MWH-C</b>		Segment Length: <b>8.36</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9607 to 9609</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>8.36</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>8.3</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment is a channelized ditch with heavily silted substrates. Fish and macroinvertebrates both scored in the poor range.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H			Channelization - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH65 9</b>	<b>04-055</b>	<b>8.50</b>	<b>0.00</b>	County: <b>DEFIANCE CO</b>	
WB Name: <i>MIDDLE FORK GORDON CREEK</i>				USEPA Reach Code: <b>04100005-</b>	
Aquatic Life Use(s): <b>MWH-C</b>		Segment Length: <b>8.50</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9609</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>2.20</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>6.30</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.2</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is a channelized ditch, but meets ecoregional expectations for modified streams. One regional reference site was sampled upstream from Mill Creek, which contributes wastewater from the Hicksville WWTP.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH65 21</b>	<b>04-400</b>	<b>52.93</b>	<b>41.68</b>	County:	
WB Name: <i>ST. JOSEPH RIVER (FISH CREEK TO OH/IND. BORDER)</i>				USEPA Reach Code: <b>04100003-002</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>11.25</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9609</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>5.00</b>	Not Assessed: <b>6.25</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>5.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> One site near the Ohio/Indiana border was sampled as part of the U.S. Geological Survey NAWQA program. This segment had the unusual occurrence of macroinvertebrates scoring in the exceptional range while the fish scored in the poor to very poor range. Poor habitat with heavy silt is the probable cause of impairment to the fish community.					
Causes of Impairment: Other habitat alterations - M Siltation - H			Sources of Impairment: Agriculture - H Channelization - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH65 26</b>	<b>04-405</b>	<b>5.57</b>	<b>0.00</b>	County: <b>WILLIAMS CO</b>	
WB Name: <i>FISH CREEK (OH./IND. BORDER TO ST. JOSEPH RIVER)</i>				USEPA Reach Code: <b>04100003-008</b>	
Aquatic Life Use(s): <b>EWH, WWH</b>		Segment Length: <b>5.57</b>			

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Assessment Cycle: **98**      Data Collection Period: **9507 to 9509**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	<b>Partial:</b>	<b>5.57</b>	<b>None:</b>	<b>0.00</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.0</b>	<b>5.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>				

**Comments:** In 1993 a diesel fuel spill of approximately 30,000 gallons entered the stream just upstream from this segment. Fish and mussel organisms were killed and the macroinvertebrates were severely impacted. The macroinvertebrates have shown almost complete recovery, meeting Exceptional Warmwater Habitat criteria. The fish populations are still somewhat impacted. Improvements have been noted since 1994 related to stream bottom sedimentation, but siltation is still a major concern. Several state and federal endangered mussel species live in this segment. An extensive mature riparian corridor exists along Fish Creek.

Causes of Impairment:

Sources of Impairment:

Priority organics - M  
Siltation - H

Agriculture - H  
Spills - M

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH66 3</b>	<b>04-160</b>	<b>58.10</b>	<b>45.64</b>	Ecoregion: <b>HELP</b> County: <b>HANCOCK CO</b> USEPA Reach Code: <b>04100008-003</b>
<b>WB Name: BLANCHARD (EAGLE CREEK TO OTTAWA CREEK)</b>				
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>12.46</b>		

Assessment Cycle: **98**      Data Collection Period: **9606 to 9609**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>12.46</b>	<b>Partial:</b>	<b>0.00</b>	<b>None:</b>	<b>0.00</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.0</b>	<b>4.3</b>	<b>8.1</b>	<b>0.0</b>	<b>0.0</b>				

**Comments:** Instream conditions are influenced by several factors. The Findlay WWTP contributes high nutrient levels, with low dissolved oxygen resulting in the lower end of the segment. Urban runoff is a factor, as well as flow alteration from a dam in Findlay upstream from the WWTP. Biological conditions have improved compared to previous sampling done in this segment.

Causes of Impairment:

Sources of Impairment:

Nutrients - H  
Flow alteration - H  
Other habitat alterations - H  
Organic enrichment/DO - M  
Organic enrichment/DO - T  
Flow alteration - T

Major Municipal Point Source - H  
Dam construction - H  
Hydromodification - H  
Urban Runoff/Storm Sewers (NPS) - S  
Agriculture - T  
Hydromodification - T

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH66 5</b>	<b>04-185</b>	<b>22.28</b>	<b>0.00</b>	County: <b>HANCOCK CO</b>	
WB Name: <b>EAGLE CREEK</b>				USEPA Reach Code: <b>04100008-012</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>22.28</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.00</b>	Not Assessed: <b>20.28</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: One regional reference site was sampled at River Mile 11.8. Good habitat and riparian buffer were present, but for unknown reasons the IBI results declined significantly compared to sampling done in 1984. The macroinvertebrates were rated good based on qualitative sampling results. Future monitoring is recommended to follow the downward trend in the fish community.			Sources of Impairment:		
Causes of Impairment: Cause Unknown - H			Source Unknown - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH66 10</b>	<b>04-160</b>	<b>63.63</b>	<b>58.10</b>	County: <b>HANCOCK CO</b>	
WB Name: <b>BLANCHARD (THE OUTLET TO EAGLE CREEK)</b>				USEPA Reach Code: <b>04100008-004</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>5.53</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9609</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>5.53</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>1.0</b>	Good: <b>4.5</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: This segment is upstream from the major influences of Findlay. Habitat is natural, and water quality is good. The City of Findlay withdraws water to an upground reservoir in this segment. Some improvement in the fish community was observed compared to sampling done in 1991. Historical records show the macroinvertebrates to be very good.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH66 13</b>	<b>04-160</b>	<b>76.27</b>	<b>63.63</b>	County: <b>HANCOCK CO</b>	
WB Name: <b>BLANCHARD RIVER (POTATO RUN TO THE OUTLET)</b>				USEPA Reach Code: <b>04100008-004</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>12.64</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9609 to 9609</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.00</b>	Not Assessed: <b>10.64</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: One regional reference site was sampled within this segment.			Sources of Impairment:		
Causes of Impairment: Nutrients - H			Nonirrigated crop production - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH66 18</b>	<b>04-160</b>	<b>90.94</b>	<b>76.27</b>	County:	
WB Name: <i>BLANCHARD (THE OUTLET TO POTATO RUN)</i>					
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>14.67</b>	USEPA Reach Code:	<b>04100008-004</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9609 to 9609</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>2.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>12.67</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>2.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> One regional reference site was sampled in this segment. Modest improvement was noted in the fish results compared to sampling done in 1983. The macroinvertebrates were good based on qualitative sampling results.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH66 21</b>	<b>04-160</b>	<b>104.20</b>	<b>90.94</b>	County:	<b>HARDIN CO</b>
WB Name: <i>BLANCHARD RIVER (HEADWATERS TO THE OUTLET)</i>					
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>13.26</b>	USEPA Reach Code:	<b>04100008-004</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9609 to 9609</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>7.26</b>
					Not Assessed: <b>6.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>7.2</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> One reference site was sampled in this segment. Conditions have remained stable since 1983.					
Causes of Impairment:			Sources of Impairment:		
Nutrients - H			Nonirrigated crop production - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>HELP</b>
<b>OH67 1</b>	<b>04-160</b>	<b>17.30</b>	<b>0.00</b>	County:	<b>PUTNAM CO</b>
WB Name: <i>BLANCHARD RIVER (CRANBERRY CREEK TO AUGLAIZE R.)</i>					
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>17.30</b>	USEPA Reach Code:	<b>04100008-001</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9606 to 9609</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>5.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>12.30</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>5.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Industrial and municipal point sources in Ottawa caused low dissolved oxygen levels downstream from town. Inputs from Glandorf (via Cranberry Creek) may increase nutrient enrichment. Agricultural nonpoint source inputs, combined with monotonous habitat and sluggish flow, result in impaired biological communities near the mouth. Future monitoring is recommended in Tawa Run (City of Ottawa) to determine CSO impacts.					
Causes of Impairment:			Sources of Impairment:		
Flow alteration - H			Hydromodification - H		
Organic enrichment/DO - H			Agriculture - M		
			Minor Municipal Point Source - M		
			Natural - S		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>HELP</b>
<b>OH67 6</b>	<b>04-160</b>	<b>30.08</b>	<b>17.30</b>	County:	<b>PUTNAM CO</b>
WB Name: <i>BLANCHARD RIVER (RILEY CREEK TO CRANBERRY CREEK)</i>				USEPA Reach Code:	<b>04100008-001</b>
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>12.78</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9609</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>4.08</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>8.70</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>4.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Biological sampling was done upstream from the Ottawa WWTP. Only dissolved oxygen levels were recorded downstream from the plant. The biological community is meeting Warmwater Habitat criteria upstream from the WWTP. Locally higher gradient may be a factor for attainment in this segment (compared to more sluggish flows in other segments). This segment has shown improvement compared to sampling done in previous years.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>HELP</b>
<b>OH67 20</b>	<b>04-160</b>	<b>45.64</b>	<b>30.08</b>	County:	
WB Name: <i>BLANCHARD RIVER (OTTAWA CREEK TO RILEY CREEK)</i>				USEPA Reach Code:	<b>04100008-003</b>
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>15.56</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9609</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>15.56</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>15.5</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Nutrient levels are high due to the Findlay WWTP, agricultural inputs, and tributaries carrying wastes from unsewered communities. Habitat is a limiting factor (heavy silt and past channelization).					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>HELP</b>
<b>OH68 1</b>	<b>04-200</b>	<b>6.57</b>	<b>0.00</b>	County:	<b>PUTNAM CO</b>
WB Name: <i>OTTAWA RIVER (SUGAR CREEK TO AUGLAIZE RIVER)</i>				USEPA Reach Code:	<b>04100007-018</b>
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>6.57</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>6.57</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>6.5</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Biological index scores show recovery from point sources in Lima. Macroinvertebrate communities scored very good to exceptional, but the fish communities lagged behind with only good to marginally good IBI scores. Future monitoring is recommended to track improvements in stream quality.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH68 2</b>	<b>04-201</b>	<b>14.40</b>	<b>0.00</b>	County: <b>PUTNAM CO</b>	
WB Name: <b>PLUM CREEK</b>				USEPA Reach Code: <b>04100007-040</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>14.40</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9606 to 9610</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>14.40</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.0</b>	Fair: <b>3.0</b>	Poor: <b>6.4</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Impacts from combined sewer overflows (CSOs) were noted in Columbus Grove upstream from the WWTP. High fecal coliforms and nutrient loads were recorded.					
Causes of Impairment:			Sources of Impairment:		
Organic enrichment/DO - H			Combined Sewer Overflow - H		
Unionized Ammonia - H			Municipal Point Sources - M		
Pathogens - H					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH68 4</b>	<b>04-203</b>	<b>28.90</b>	<b>0.00</b>	County:	
WB Name: <b>SUGAR CREEK</b>				USEPA Reach Code: <b>04100007-020</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>28.90</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9609 to 9610</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full: <b>1.20</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>3.30</b>	None: <b>0.00</b>	Not Assessed: <b>24.40</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>1.2</b>	Fair: <b>3.3</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Two regional reference sites were sampled in this segment. The site at river mile 0.7 showed improvement compared to sampling done in 1984. However, the site at river mile 3.5 declined from attainment of Warmwater Habitat in 1985 to scores in the fair range in 1996. The cause of this decline is unknown. Habitat was poor at both sites.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H			Channelization - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH68 8</b>	<b>04-200</b>	<b>22.93</b>	<b>6.57</b>	County:	
WB Name: <b>OTTAWA RIVER (HONEY RUN TO SUGAR CREEK)</b>				USEPA Reach Code: <b>04100007-018</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>16.36</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9606 to 9610</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full: <b>1.43</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>5.90</b>	None: <b>9.03</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>1.4</b>	Fair: <b>5.9</b>	Poor: <b>9.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Municipal and industrial point sources in Lima, along with smaller WWTPs downstream from Lima, were causes of non-attainment and partial attainment of Warmwater Habitat criteria. This segment has shown improvements in the biological communities compared to sampling done in previous years.					
Causes of Impairment:			Sources of Impairment:		
Unknown toxicity - H			Municipal Point Sources - H		
Pathogens - M			Industrial Point Sources - H		
Pesticides - S					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:						
<b>OH68 9</b>	<b>04-207</b>	<b>9.30</b>	<b>0.00</b>	Ecoregion: <b>HELP</b> County: _____ USEPA Reach Code: <b>04100007-</b>					
WB Name: <i>LEATHERWOOD DITCH</i>									
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>9.30</b>							
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9607 to 9610</b>		Assessment Age: <b>Current</b>					
Aquatic Life Use Attainment:									
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>	None:	<b>2.10</b>	Not Assessed:	<b>7.20</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>2.1</b>	Very Poor: <b>0.0</b>				
Comments: This segment is a channelized ditch. One regional reference site near the mouth was sampled in 1996. IBI scores declined since 1983, falling from the fair range into the poor range. The cause of this decline is unknown. Habitat quality has remained unchanged for 13 years.									
Causes of Impairment: <div style="display: flex; justify-content: space-between;"> <div>                     Other habitat alterations - H                 </div> <div>                     Channelization - H                 </div> </div>									
WBID #:	River Code:	Upper River Mile:	Lower River Mile:						
<b>OH68 10</b>	<b>04-208</b>	<b>9.45</b>	<b>0.00</b>	Ecoregion: <b>HELP</b> County: <b>ALLEN CO</b> USEPA Reach Code: <b>04100007-039</b>					
WB Name: <i>PIKE RUN</i>									
Aquatic Life Use(s): <b>MWH-C</b>		Segment Length: <b>9.45</b>							
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9606 to 9610</b>		Assessment Age: <b>Current</b>					
Aquatic Life Use Attainment:									
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>	None:	<b>9.45</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>9.4</b>	Very Poor: <b>0.0</b>				
Comments: Combined sewer overflows from Lima in the headwaters impact Pike Run upstream from the American Bath WWTP discharge. Sediment concentrations of cadmium were very high. Impact in the lower mile was due to septic drainage from the village of Gomer.									
Causes of Impairment: <div style="display: flex; justify-content: space-between;"> <div>                     Pathogens - H                      Cadmium - M                 </div> <div>                     Sources of Impairment:                      Combined Sewer Overflow - H                      Municipal Point Sources - H                 </div> </div>									
WBID #:	River Code:	Upper River Mile:	Lower River Mile:						
<b>OH68 11</b>	<b>04-200</b>	<b>35.30</b>	<b>22.93</b>	Ecoregion: <b>ECBP</b> County: _____ USEPA Reach Code: <b>04100007-018</b>					
WB Name: <i>OTTAWA RIVER (LITTLE OTTAWA RIVER TO HONEY RUN)</i>									
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>12.37</b>							

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Assessment Cycle: **98**      Data Collection Period: **9606 to 9610**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	<b>Partial:</b>	<b>5.87</b>	<b>None:</b>	<b>6.50</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>5.8</b>	Poor: <b>6.5</b>	Very Poor: <b>0.0</b>				

**Comments:** This segment is still showing impacts from municipal and industrial point sources in Lima. Bypasses from the Shawnee #2 WWTP are also contributing to pollutant loadings. Sediments in the upper portion of the segment had elevated levels of PAHs. The macroinvertebrate communities showed some improvement compared to previous surveys, but fish communities are still in the poor range.  
 Causes of Impairment:

- |                           |                              |
|---------------------------|------------------------------|
| Organic enrichment/DO - H | Municipal Point Sources - H  |
| Unknown toxicity - H      | Industrial Point Sources - H |
| Pesticides - S            | Spills - M                   |

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH68 13</b>	<b>04-210</b>	<b>5.90</b>	<b>0.00</b>	Ecoregion: <b>HELP</b> County: <b>ALLEN CO</b> USEPA Reach Code: <b>04100007-028</b>
WB Name: <b>DUG RUN</b>				
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>5.90</b>		

Assessment Cycle: **98**      Data Collection Period: **9510 to 9510**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.80</b>	Full, But Threatened:	<b>0.00</b>	<b>Partial:</b>	<b>5.10</b>	<b>None:</b>	<b>0.00</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.8</b>	Poor: <b>5.1</b>	Very Poor: <b>0.0</b>				

**Comments:** Stormwater runoff from the city of Lima, and development in the extreme headwaters have impacts on the quality of this stream. The stream channel and banks are intact throughout most of the segment, but biological quality is not in attainment of Warmwater Habitat criteria.  
 Causes of Impairment:

- |                           |                                      |
|---------------------------|--------------------------------------|
| Flow alteration - M       | Urban Runoff/Storm Sewers (NPS) - H  |
| Organic enrichment/DO - H | Land development/Suburbanization - M |

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH68 16</b>	<b>04-213</b>	<b>6.40</b>	<b>0.00</b>	Ecoregion: <b>ECBP</b> County: <b>ALLEN CO</b> USEPA Reach Code: <b>04100007-</b>
WB Name: <b>LITTLE OTTAWA RIVER</b>				
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>6.40</b>		

Assessment Cycle: **98**      Data Collection Period: **9606 to 9610**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	<b>Partial:</b>	<b>0.00</b>	<b>None:</b>	<b>6.40</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>6.4</b>	Very Poor: <b>0.0</b>				

**Comments:** Water quality in this segment appeared to be good. However, fish communities were in the poor range and the macroinvertebrates were in the fair range.  
 Causes of Impairment:

- |                |                                     |
|----------------|-------------------------------------|
| Nutrients - H  | Urban Runoff/Storm Sewers (NPS) - H |
| Pesticides - S |                                     |

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH68 17</b>	<b>04-200</b>	<b>50.70</b>	<b>35.30</b>	County: <b>ALLEN CO</b>	
WB Name: <b>OTTAWA RIVER (HOG CREEK TO LITTLE OTTAWA RIVER)</b>				USEPA Reach Code: <b>04100007-019</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>15.40</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9606 to 9610</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full: <b>6.30</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>4.20</b>	None: <b>4.90</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>6.3</b>	Fair: <b>4.2</b>	Poor: <b>4.9</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Biological communities are in the good to exceptional range in the upper portion of this segment. Partial and non-attainment upstream from the Lima CSOs may be attributed to poor septic systems. Five major CSOs in Lima contribute low D.O, high ammonia and total suspended solids during rainfall events. A series of lowhead dams is also responsible for partial and non-attainment within the City of Lima. Impacts in the lower portion of the segment are from the Lima WWTP, BP Refinery, and PCS Nitrogen (BP Chemical). Improvements at the Lima WWTP, and the possibility of BP Refinery reducing loads by 50%, create great potential for improvements in the stream. Areas near PCS continue to be the most degraded. Oil spills and pipeline leaks are a problem.					
Causes of Impairment:			Sources of Impairment:		
Unionized Ammonia - H			Industrial Point Sources - H		
Organic enrichment/DO - H			Municipal Point Sources - H		
Other habitat alterations - M			Combined Sewer Overflow - H		
Oil and grease - M			Dam construction - M		
Unknown toxicity - M			Spills - M		
Metals - S			Onsite wastewater systems (septic tanks) - M		
Pesticides - S			Urban Runoff/Storm Sewers (NPS) - H		
Priority organics - S					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH68 17.3</b>	<b>04-261</b>	<b>1.82</b>	<b>0.00</b>	County:	
WB Name: <b>ZURMEHLY CREEK</b>				USEPA Reach Code:	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>1.82</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9606 to 9610</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>1.82</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>1.8</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Sediment samples contained elevated levels of PAHs, cadmium and chromium. Macroinvertebrate communities were fair, while the fish communities were fair to poor.					
Causes of Impairment:			Sources of Impairment:		
Priority organics - H			Urban Runoff/Storm Sewers (NPS) - M		
Pathogens - M					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH69 5</b>	<b>04-134</b>	<b>26.00</b>	<b>0.00</b>	County:	
WB Name: <b>HOAGLIN CREEK</b>				USEPA Reach Code: <b>04100007-</b>	
Aquatic Life Use(s): <b>MWH-C</b>		Segment Length: <b>26.00</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9607 to 9609</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>1.60</b>
				None:	<b>0.00</b>
					Not Assessed: <b>24.40</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>1.6</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment is channelized. Fish communities were not in attainment of ecoregional expectations. The macroinvertebrates were rated good based on qualitative sampling results.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H			Channelization - H		
Flow alteration - M			Natural - M		
			Nonirrigated crop production - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH69 8</b>	<b>04-137</b>	<b>17.20</b>	<b>0.00</b>	County:	
WB Name: <b>HAGERMAN CREEK</b>				USEPA Reach Code: <b>04100007-010</b>	
Aquatic Life Use(s): <b>MWH-C</b>		Segment Length: <b>17.20</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9607 to 9607</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>17.20</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>17.2</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Poor habitat is present throughout the entire length of the stream. Fish communities were in the poor range, while the macroinvertebrates were moderately good.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H			Channelization - H		
Nutrients - M			Nonirrigated crop production - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH69 9</b>	<b>04-131</b>	<b>23.34</b>	<b>11.11</b>	County:	
WB Name: <b>PRAIRIE CREEK (HEADWATERS TO HAGERMAN CREEK)</b>				USEPA Reach Code: <b>04100007-009</b>	
Aquatic Life Use(s): <b>MWH-C</b>		Segment Length: <b>13.99</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9609 to 9609</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>2.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>11.99</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment has been channelized. One regional reference site was sampled in 1996. Fish communities showed modest improvement compared to sampling done in 1983. Macroinvertebrate communities scored moderately good based on qualitative sampling results.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH69 15</b>	<b>04-143</b>	<b>31.10</b>	<b>0.00</b>	County: <b>VAN WERT CO</b>	
WB Name: <b>TOWN CREEK</b>				USEPA Reach Code: <b>04100007-</b>	
Aquatic Life Use(s): <b>MWH-C</b>		Segment Length: <b>31.10</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9609 to 9609</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>12.30</b>
				None:	<b>0.00</b>
					Not Assessed: <b>18.80</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>12.3</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: One regional reference site was sampled upstream from Van Wert. Poor habitat is the major cause of non-attainment for the fish communities. The macroinvertebrates rated significantly higher (very good to exceptional) based on qualitative sampling results.			Sources of Impairment:		
Causes of Impairment: Other habitat alterations - H Flow alteration - M			Channelization - H Natural - M Nonirrigated crop production - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH69 20</b>	<b>04-130</b>	<b>35.37</b>	<b>8.45</b>	County:	
WB Name: <b>LITTLE AUGLAIZE RIVER (EVANS DITCH TO DOG CREEK)</b>				USEPA Reach Code: <b>04100007-013</b>	
Aquatic Life Use(s): <b>MWH-C</b>		Segment Length: <b>26.92</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9609 to 9609</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>26.92</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>26.9</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: The entire Little Auglaize River mainstem has been channelized. One regional reference site upstream from the Ottoville WWTP was sampled in 1996. A noticeable decline was observed in the fish results compared to sampling done in 1983. The cause of this decline is unknown. Macroinvertebrate communities were good based on qualitative sampling results. Chemical results showed nutrient levels to be low for the Huron Erie Lake Plain ecoregion.			Sources of Impairment:		
Causes of Impairment: Other habitat alterations - H			Channelization - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH69 25</b>	<b>04-130</b>	<b>46.34</b>	<b>35.37</b>	County:	
WB Name: <b>LITTLE AUGLAIZE RIVER (HEADWATERS TO EVANS DITCH)</b>				USEPA Reach Code: <b>04100007-013</b>	
Aquatic Life Use(s): <b>MWH-C</b>		Segment Length: <b>19.02</b>			

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Assessment Cycle: **98**      Data Collection Period: **9609 to 9609**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	<b>Partial:</b>	<b>6.72</b>	<b>None:</b>	<b>0.00</b>	<b>Not Assessed:</b>	<b>12.30</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.0</b>	<b>0.0</b>	<b>6.7</b>	<b>0.0</b>	<b>0.0</b>				

**Comments:** The entire Little Auglaize River mainstem has been channelized. Fish sampling done in 1996 showed non-attainment of Modified Warmwater Habitat criteria. Macroinvertebrate communities were rated very good based on qualitative sampling results.

Causes of Impairment:

Sources of Impairment:

Other habitat alterations - H

Channelization - H

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH70 5</b>	<b>04-100</b>	<b>47.02</b>	<b>33.26</b>	Ecoregion: <b>HELP</b> County: <b>PUTNAM CO</b> USEPA Reach Code: <b>04100007-015</b>
WB Name: <b>AUGLAIZE RIVER (JENNINGS CREEK TO OTTAWA RIVER)</b>				
Aquatic Life Use(s): <b>EWB</b>		Segment Length: <b>13.76</b>		

Assessment Cycle: **98**      Data Collection Period: **9607 to 9610**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>13.76</b>	Full, But Threatened:	<b>0.00</b>	<b>Partial:</b>	<b>0.00</b>	<b>None:</b>	<b>0.00</b>	<b>Not Assessed:</b>	<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.0</b>	<b>13.7</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>				

**Comments:** One site was sampled near Ft. Jennings as part of the U.S. Geological Survey NAWQA program. Fish and macroinvertebrate scores were both in attainment of Warmwater Habitat criteria.

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH70 7</b>	<b>04-230</b>	<b>14.50</b>	<b>0.00</b>	Ecoregion: <b>HELP</b> County: USEPA Reach Code: <b>04100007-031</b>
WB Name: <b>JENNINGS CREEK</b>				
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>14.50</b>		

Assessment Cycle: **98**      Data Collection Period: **9607 to 9609**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	<b>Partial:</b>	<b>0.00</b>	<b>None:</b>	<b>7.40</b>	<b>Not Assessed:</b>	<b>7.10</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>7.4</b>	<b>0.0</b>				

**Comments:** This segment is channelized, and has poor instream substrates. One regional reference site upstream from Delphos was sampled. A poor to fair biological community was present, apparently related to habitat. Water chemistry results showed water quality to be good.

Causes of Impairment:

Sources of Impairment:

Other habitat alterations - H

Channelization - H

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH70 24</b>	<b>04-240</b>	<b>3.30</b>	<b>0.00</b>	County:	<b>AUGLAIZE CO</b>
WB Name: <b>HUFFMAN CREEK</b>				USEPA	
Aquatic Life Use(s): <b>WWH</b>				Reach Code:	<b>04100007-</b>
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9607 to 9607</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>3.30</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>3.3</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> One regional reference site was sampled at river mile 1.7. The fish results showed significant improvement compared to sampling done in 1987, with the IBI score improving from 44 to 50. The macroinvertebrates were rated good based on qualitative sampling results. The Uniopolis WWTP is located upstream from this site. Water chemistry results showed nutrient levels to be slightly elevated. Future monitoring is recommended.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH70 25</b>	<b>04-100</b>	<b>101.90</b>	<b>93.09</b>	County:	
WB Name: <b>AUGLAIZE RIVER (HEADWATERS TO BLACKHOOF CREEK)</b>				USEPA	
Aquatic Life Use(s): <b>WWH</b>				Reach Code:	<b>04100007-015</b>
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9607 to 9610</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>8.81</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>8.8</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment showed significant improvement compared to sampling done in 1983. Biological and chemical water quality appear to be good.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>HELP</b>
<b>OH71 1</b>	<b>04-100</b>	<b>11.08</b>	<b>0.00</b>	County:	
WB Name: <b>AUGLAIZE RIVER (FLATROCK CREEK TO MAUMEE RIVER)</b>				USEPA	
Aquatic Life Use(s): <b>WWH</b>				Reach Code:	<b>04100007-</b>
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9607 to 9609</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>4.10</b>
				None:	<b>0.00</b>
					Not Assessed: <b>6.98</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.9</b>	Fair: <b>0.0</b>	Poor: <b>3.2</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> One regional reference site was sampled in this segment, located downstream from the dam near Harding Road. Fish sampling resulted in low species diversity and low numbers of fish. Macroinvertebrate communities were in the good range based on qualitative sampling results.					
Causes of Impairment:			Sources of Impairment:		
Flow alteration - H			Nonirrigated crop production - M		
Other habitat alterations - M			Hydromodification - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH71 19</b>	<b>04-100</b>	<b>16.45</b>	<b>11.08</b>	County: <b>PAULDING CO</b>	
WB Name: <b>AUGLAIZE RIVER (L. AUGLAIZE R. TO FLATROCK CREEK)</b>				USEPA Reach Code: <b>04100007-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>5.37</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9609</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>5.37</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>5.3</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: This segment is impounded from the dam at Defiance. IBI scores were in the fair range, but still below ecoregional expectations.			Sources of Impairment:		
Causes of Impairment: Flow alteration - H			Hydromodification - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH71 20</b>	<b>04-120</b>	<b>16.27</b>	<b>0.00</b>	County: <b>PAULDING CO</b>	
WB Name: <b>BLUE CREEK (CUNNINGHAM CREEK TO AUGLAIZE RIVER)</b>				USEPA Reach Code: <b>04100007-005</b>	
Aquatic Life Use(s): <b>MWH-C</b>		Segment Length: <b>16.27</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9609</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.00</b>	Not Assessed: <b>14.27</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: Most of the length of this stream is channelized with poor habitat. There was a noticeable decline in the IBI score compared to sampling done in 1983. The cause is unknown. Macroinvertebrate communities remained stable.			Sources of Impairment:		
Causes of Impairment: Other habitat alterations - H			Channelization - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH73 17</b>	<b>04-038</b>	<b>11.60</b>	<b>0.00</b>	County: <b>HENRY CO</b>	
WB Name: <b>KONZEN DITCH</b>				USEPA Reach Code: <b>04100009-</b>	
Aquatic Life Use(s): <b>MWH-C</b>		Segment Length: <b>11.60</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9609</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>1.70</b>	Not Assessed: <b>9.90</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>1.7</b>	Very Poor: <b>0.0</b>
Comments: This stream is a channelized ditch. Fish and macroinvertebrate sampling results showed scores below the ecoregional expectations for channelized streams.			Sources of Impairment:		
Causes of Impairment: Other habitat alterations - H			Channelization - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH73 21</b>	<b>04-001</b>	<b>52.18</b>	<b>45.59</b>	County: <b>HENRY CO</b>	
WB Name: <b>MAUMEE RIVER (WADE CREEK TO VAN HYNING CREEK)</b>				USEPA Reach Code: <b>04100009-009</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>6.59</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9609</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>6.59</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>6.5</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: Although the IBI scores were only in the fair range, this segment meets ecoregional expectations for fish communities. Poor habitat, slow current and siltation are contributing factors to fair and poor macroinvertebrate communities. The entire Maumee River mainstem is affected by extensive agricultural land use.			Sources of Impairment:		
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H			Nonirrigated crop production - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH73 26</b>	<b>04-001</b>	<b>64.04</b>	<b>52.18</b>	County:	
WB Name: <b>MAUMEE RIVER (AUGLAIZE RIVER TO WADE CREEK)</b>				USEPA Reach Code: <b>04100009-009</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>11.86</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9609</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>3.32</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.00</b>	Not Assessed: <b>6.54</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>3.3</b>	Poor: <b>2.0</b>	Very Poor: <b>0.0</b>
Comments: Two regional reference sites in the lower portion of this segment were sampled. Some effects were present from municipal and industrial discharges originating in Defiance. Agricultural influences also play a role in the fair to poor biological scores.			Sources of Impairment:		
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H			Nonirrigated crop production - H		
Organic enrichment/DO - M			Major Industrial Point Source - M		
			Major Municipal Point Source - M		
			Landfills - M		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>HELP</b>
<b>OH74 1</b>	<b>04-001</b>	<b>24.06</b>	<b>20.69</b>	County:	<b>LUCAS CO</b>
WB Name: <b>MAUMEE RIVER (TONTOGANY CREEK TO WATERVILLE)</b>				USEPA	<b>04100009-005</b>
Aquatic Life Use(s): <b>WWH</b>				Segment Length:	<b>3.38</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9609 to 9610</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>3.38</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>3.3</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> One site at Waterville was sampled in 1996 as part of the U.S. Geological Survey NAWQA program. The macroinvertebrates scored in the exceptional range, while the fish only scored in the fair range. This portion of the stream is in the rapids area of the Maumee River. Greenish water was indicative of nutrient enrichment. The entire Maumee River mainstem is heavily affected by extensive agricultural land use.					
Causes of Impairment:			Sources of Impairment:		
Nutrients - H			Nonirrigated crop production - H		
WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>HELP</b>
<b>OH75 17</b>	<b>04-310</b>	<b>5.20</b>	<b>0.00</b>	County:	<b>LUCAS CO</b>
WB Name: <b>SIBLEY CREEK</b>				USEPA	<b>04100001-</b>
Aquatic Life Use(s): <b>WWH</b>				Segment Length:	<b>5.20</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9608 to 9610</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>5.20</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.5</b>	Very Poor: <b>4.7</b>
<b>Comments:</b> No fish were captured in the upper section of this stream in 1993 or 1996. Near the mouth, some fish were present. A strong creosote odor was present in the sediments as were elevated PCBs. The substrates at river mile 0.8 were hot (temperature).					
Causes of Impairment:			Sources of Impairment:		
Priority organics - H			Contaminated sediments - H		
Thermal modifications - H			Landfills - M		
WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>ECBP</b>
<b>OH79 16</b>	<b>05-300</b>	<b>42.30</b>	<b>26.74</b>	County:	
WB Name: <b>TYMOCHTEE CREEK (L. TYMOCHTEE CR. TO WARPOLE CR.)</b>				USEPA	<b>04100011-011</b>
Aquatic Life Use(s): <b>WWH</b>				Segment Length:	<b>15.56</b>



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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH79 23</b>	<b>05-319</b>	<b>7.40</b>	<b>0.00</b>	County:	
WB Name: <i>PAWPAW RUN</i>				USEPA Reach Code: <b>04100011-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>7.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9509</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>7.40</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>7.4</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> Sampling in this segment was done prior to the construction of the AgriGeneral chicken farm. Habitat modifications in the headwaters significantly affect the biological community. The stream has low and intermittent flow conditions during the summer months. The lower portion of the segment has better habitat, but is not attaining Warmwater Habitat criteria.</p> <p>Causes of Impairment:</p> <p>Siltation - H Nutrients - M</p> <p>Sources of Impairment:</p> <p>Channelization - H Natural - M Nonirrigated crop production - H</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH79 24</b>	<b>05-320</b>	<b>3.60</b>	<b>0.00</b>	County: <b>MARION CO</b>	
WB Name: <i>CARROLL DITCH</i>				USEPA Reach Code: <b>04100011-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>3.60</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9509 to 9509</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>3.60</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>3.6</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> This stream is a channelized ditch which flows near the Killdeer Plains Wildlife Area. Low flow and poor habitat account for the non-attainment status.</p> <p>Causes of Impairment:</p> <p>Other habitat alterations - H</p> <p>Sources of Impairment:</p> <p>Channelization - H Natural - M Removal of riparian vegetation - H</p>					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH79 25</b>	<b>05-321</b>	<b>2.90</b>	<b>0.00</b>	County: <b>MARION CO</b>	
WB Name: <b>ENOCH CREEK</b>				USEPA Reach Code: <b>04100011-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>2.90</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9509</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.90</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.9</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: This stream may have been channelized many years ago. Riparian consisted of mature trees, but riffle/pool development was lacking. Low flow and poor habitat probably account for non-attainment status. The high percentage of herbivores in the fish community suggests nutrient enrichment. Future manure spreading activities are scheduled for fields within the basin.			Sources of Impairment:		
Causes of Impairment: Nutrients - H			Nonirrigated crop production - H Natural - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH79 26</b>	<b>05-322</b>	<b>7.10</b>	<b>0.00</b>	County: <b>MARION CO</b>	
WB Name: <b>PRAIRIE RUN</b>				USEPA Reach Code: <b>04100011-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>7.10</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9509</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>7.10</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>7.1</b>	Very Poor: <b>0.0</b>
Comments: Channelization is the major cause of non-attainment for the entire length of the this stream. Stream maintenance is performed regularly in the upper watershed. The lower portion was channelized historically, but had a good riparian consisting of mature trees. No recovery of the riffle/pool development was observed. The biological community was poor.			Sources of Impairment:		
Causes of Impairment: Siltation - H Nutrients - M Other habitat alterations - H			Channelization - H Removal of riparian vegetation - H Nonirrigated crop production - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH79 27</b>	<b>05-323</b>	<b>4.20</b>	<b>0.00</b>	County: <b>MARION CO</b>	
WB Name: <i>THOMPSON DITCH</i>				USEPA Reach Code: <b>04100011-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>4.20</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9509 to 9509</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>4.20</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>4.2</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This is a small, channelized headwaters stream which flows near the Killdeer Plains Wildlife Area. The fish community scored in the poor range. Low flow and poor habitat are contributing factors to the non-attainment status. The water had a bluish-gray cast to it, possibly from suspended clay particles.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H			Channelization - H		
Nutrients - M			Natural - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH80 11</b>	<b>05-033</b>	<b>12.50</b>	<b>0.00</b>	County:	
WB Name: <i>LITTLE SANDUSKY RIVER</i>				USEPA Reach Code: <b>04100011-032</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>12.50</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9509</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>9.30</b>
					Not Assessed: <b>3.20</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>6.8</b>	Poor: <b>2.5</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The upper site in this segment had knee-deep black muck, and was choked with arrowleaf plants. The lower site had habitat more suitable for supporting a Warmwater Habitat biological community. Silt load and fine-grained substrates are probably limiting factors.					
Causes of Impairment:			Sources of Impairment:		
Organic enrichment/DO - H			Channelization - H		
Siltation - H			Nonirrigated crop production - H		
Noxious aquatic plants - M					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>ECBP</b>	
<b>OH80 11.1</b>	<b>05-070</b>	<b>4.63</b>	<b>0.00</b>	County: <b>MARION CO</b>	
WB Name: <i>TRIB. TO LITTLE SANDUSKY R. (RM 8.93)</i>				USEPA Reach Code: <b>04100011-</b>	
Aquatic Life Use(s): <b>MWH-C</b>		Segment Length: <b>4.63</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9509</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>4.63</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>4.6</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is a channelized ditch with little to no tree cover and grass banks. The channel was filled with thigh-deep black muck. The fish and macroinvertebrate communities both scored in the poor range.					
Causes of Impairment:			Sources of Impairment:		
Siltation - H			Nonirrigated crop production - H		
Organic enrichment/DO - H			Channelization - H		
Other habitat alterations - H			Removal of riparian vegetation - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH82 21.1</b>	<b>05-223</b>	<b>12.14</b>	<b>0.00</b>	County: <b>SANDUSKY CO</b>	
WB Name: <i>GRIES DITCH</i>				USEPA Reach Code: <b>04100011-</b>	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>12.14</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9507</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>12.14</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>12.1</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Past channelization greatly disturbed the habitat of this stream by scraping it down to the bedrock. Fracturing of the bedrock substrate is gradually allowing the stream to return to natural conditions. Cattle have direct access to the stream, resulting in heavy nutrient enrichment.					
Causes of Impairment:			Sources of Impairment:		
Nutrients - H			Pasture land - H		
Organic enrichment/DO - H			Onsite wastewater systems (septic tanks) - M		
Other habitat alterations - H			Channelization - H		
			Nonirrigated crop production - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>HELP</b>
<b>OH83 3.3</b>	<b>05-058</b>	<b>5.70</b>	<b>0.00</b>	County:	<b>ERIE CO</b>
WB Name: <b>CASWELL DITCH</b>				USEPA Reach Code:	<b>04100011-</b>
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>5.70</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9507 to 9507</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>5.70</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed:
					<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>5.7</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Comments:</b> This stream is a channelized ditch. Good groundwater flow helps this stream meet its use designation.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>HELP</b>
<b>OH83 11</b>	<b>05-045</b>	<b>14.90</b>	<b>0.00</b>	County:	<b>SANDUSKY CO</b>
WB Name: <b>RACCOON CREEK</b>				USEPA Reach Code:	<b>04100011-</b>
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>14.90</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9507 to 9510</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>2.50</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>1.00</b>
				None:	<b>11.40</b>
					Not Assessed:
					<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>0.0</b>	<b>3.5</b>	<b>11.0</b>	<b>0.4</b>
<b>Comments:</b> This stream is impacted by sewer overflows and poor performance by the Clyde WWTP. Whirlpool Corporation contributes to the problems by adding significant loads of nitrate-nitrite to the Clyde WWTP. The fish and macroinvertebrate communities were both severely impaired.					
<b>Causes of Impairment:</b>			<b>Sources of Impairment:</b>		
Organic enrichment/DO - M			Major Municipal Point Source - H		
Organic enrichment/DO - H			Major Municipal Point Source - M		
Nutrients - S			Channelization - M		
Siltation - M			Onsite wastewater systems (septic tanks) - M		
Other habitat alterations - M			Contaminated sediments - M		
Metals - M					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>HELP</b>	
<b>OH83 11.1</b>	<b>05-053</b>	<b>7.29</b>	<b>0.00</b>	County: <b>SANDUSKY CO</b>	
WB Name: <i>LITTLE RACCOON CREEK</i>				USEPA Reach Code: <b>0410001-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>7.29</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9507</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>7.29</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>7.2</b>	Very Poor: <b>0.0</b>
Comments: This segment is a channelized headwaters stream.			Sources of Impairment:		
Causes of Impairment:			Channelization - H		
Other habitat alterations - H			Onsite wastewater systems (septic tanks) - S		
Organic enrichment/DO - S					
Siltation - S					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH86 5.1</b>	<b>20-030</b>	<b>7.57</b>	<b>0.00</b>	County: <b>LORAIN CO</b>	
WB Name: <i>TRIB. TO EAST BRANCH BLACK R. (RM 22.65)</i>				USEPA Reach Code: <b>04110001-</b>	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>7.57</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9607</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>7.57</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>7.5</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: The fish community scored well within the Warmwater Habitat criteria (IBI=48). Mottled sculpin and Redside dace (cool-water species) were both present in significant numbers. Sampling done in 1977 by NOACA indicated the stream was below WWH criteria, while sampling by Ohio EPA in 1996 showed results close to Exceptional Warmwater Habitat. Future monitoring is recommended to follow the upward trend of the biological community.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH86 6</b>	<b>20-011</b>	<b>5.80</b>	<b>0.00</b>	County: <b>LORAIN CO</b>	
WB Name: <i>SALT CREEK</i>				USEPA Reach Code: <b>04110001-022</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>5.80</b>			

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Assessment Cycle: **98**      Data Collection Period: **9606 to 9606**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>	None:	<b>5.80</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.0</b>	<b>0.0</b>	<b>5.8</b>	<b>0.0</b>	<b>0.0</b>				

**Comments:** General agriculture consisting of a mixture of row crop and pasture land is present throughout the basin. Silt was heavy in the stream channel. Habitat was available to support a Warmwater Habitat fish community, but silt is probably the limiting factor. Redside dace and Brook stickleback (cool-water species) were present in the fish community. Fish sampling done by NOACA in 1977 scored an IBI of 44, compared to an IBI of 34 in 1996 from EPA sampling. Future monitoring is recommended to see if the downward trend is continuing.  
 Causes of Impairment: \_\_\_\_\_ Sources of Impairment: \_\_\_\_\_

Siltation - M      Agriculture - M

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH86 7.1</b>	<b>20-031</b>	<b>7.65</b>	<b>0.00</b>	Ecoregion: <b>EOLP</b>
WB Name: <i>TRIB. TO EAST BRANCH BLACK R. (RM 39.06)</i>				County: <b>MEDINA CO</b>
Aquatic Life Use(s): <b>NONE</b>				USEPA Reach Code: <b>04110001-</b>
		Segment Length:	<b>7.65</b>	

Assessment Cycle: **98**      Data Collection Period: **9606 to 9606**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>7.65</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>	None:	<b>0.00</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.0</b>	<b>7.6</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>				

**Comments:** The fish results were well within the Warmwater Habitat criteria. The stream has excellent riparian for most of its length, and is very aesthetic. Cool-water fish species were abundant. No impacts were observed.

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH86 7.2</b>	<b>20-019</b>	<b>2.93</b>	<b>0.00</b>	Ecoregion: <b>EOLP</b>
WB Name: <i>TRIB. TO EAST BRANCH BLACK R. (RM 41.4)</i>				County: <b>MEDINA CO</b>
Aquatic Life Use(s): <b>NONE</b>				USEPA Reach Code: <b>04110001-</b>
		Segment Length:	<b>2.93</b>	

Assessment Cycle: **98**      Data Collection Period: **9606 to 9606**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>2.93</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>	None:	<b>0.00</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>2.9</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>				

**Comments:** The fish community was excellent (IBI=50). The presence of Southern redbelly dace, redbelly dace, and Mottled sculpin in very large numbers indicates high quality water.

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>EOLP</b>
<b>OH86 7.3</b>	<b>20-037</b>	<b>6.23</b>	<b>0.00</b>	County:	
WB Name: <i>TRIB. TO E. BR. BLACK R. (RM 28.50)</i>					
Aquatic Life Use(s):	<b>NONE</b>	Segment Length:	<b>6.23</b>	USEPA Reach Code:	
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9607 to 9607</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>1.00</b>
					Not Assessed: <b>5.23</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>1.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> This stream has been channelized in the past, and is in the stage of recovering. Habitat alteration is the primary cause of non-attainment. Tolerant species dominated the fish community. However, water quality is apparently not a major issue based on the presence of Mottled sculpin, Redside dace, and Brook stickleback (cool-water fish species).</p> <p>Causes of Impairment: Other habitat alterations - H Sources of Impairment: Channelization - H</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>EOLP</b>
<b>OH86 7.4</b>	<b>20-038</b>	<b>8.61</b>	<b>0.00</b>	County:	
WB Name: <i>TRIB. TO E. BR. BLACK R. (RM 28.65)</i>					
Aquatic Life Use(s):	<b>NONE</b>	Segment Length:	<b>8.61</b>	USEPA Reach Code:	
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9607 to 9607</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>8.61</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>8.6</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> There are no apparent problems in this stream. Cool-water fish species were present in large numbers. Land use in the basin is sparse residential and general agriculture. There is a good riparian of mature trees along much of the length of the stream.</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>EOLP</b>
<b>OH86 8</b>	<b>20-012</b>	<b>5.40</b>	<b>0.00</b>	County:	
WB Name: <i>CROW CREEK</i>					
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>5.40</b>	USEPA Reach Code:	<b>04110001-015</b>
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9607 to 9607</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>5.40</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.4</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> This stream was borderline attaining Warmwater Habitat criteria. Marginal habitat, fine-grained substrates, and low flow all contribute to moderate IBI scores. Mottled sculpin and Brook stickleback (cool-water fish species) were present.</p>					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH86 9</b>	<b>20-013</b>	<b>7.70</b>	<b>0.00</b>	County: <b>MEDINA CO</b>	
WB Name: <b>COON CREEK</b>				USEPA Reach Code: <b>04110001-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>7.70</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9606</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>2.80</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>4.90</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>2.8</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The sampling site was located just downstream from the dam at the City of Spencer lake. The fish community was highly influenced by the lake, with sunfish being very abundant. Habitat was good despite historical channelization of the north bank. Large cobble and shale chunks were abundant in the bedrock substrates. There was no change in the IBI score compared to sampling done in 1977 by NOACA.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH86 12</b>	<b>20-016</b>	<b>5.40</b>	<b>0.00</b>	County: <b>MEDINA CO</b>	
WB Name: <b>CLEAR CREEK</b>				USEPA Reach Code: <b>04110001-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>5.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9606</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>5.40</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.4</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The fish community appeared to be healthy (IBI=44). However, sampling done by NOACA in 1977 showed scores well into the Exceptional Warmwater Habitat range (IBI=56). The reason for the decline is unknown. Habitat was very good. Cool-water fish species were present in large numbers in 1996. Future biological monitoring is recommended to see if the downward trend is continuing.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH88 1</b>	<b>19-030</b>	<b>11.00</b>	<b>0.00</b>	County: <b>SUMMIT CO</b>	
WB Name: <b>L. CUYAHOGA R. (WINGFOOT LAKE OUT. TO CUYAHOGA R.)</b>				USEPA Reach Code: <b>04110002-002</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>11.00</b>			

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Assessment Cycle: **98**      Data Collection Period: **9607 to 9610**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>	None:	<b>11.00</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.0</b>	Poor: <b>7.0</b>	Very Poor: <b>2.0</b>				

**Comments:** This segment is impacted by urban runoff and stormsewer discharges. Much pollution enters the streams during storm events. Two dams prevent recolonization from downstream areas. Some improvement in the macroinvertebrate community was documented in the upper 3 miles of the segment. No future biological monitoring is warranted unless the combined sewer overflow situation is remediated.

Causes of Impairment:

Zinc - M  
 Organic enrichment/DO - H  
 Other habitat alterations - S  
 Total toxics - M

Sources of Impairment:

Combined Sewer Overflow - M  
 Urban Runoff/Storm Sewers (NPS) - H  
 Hydromodification - H  
 Highway maintenance and runoff - M  
 Contaminated sediments - S

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH88 1.1</b>	<b>19-051</b>	<b>4.48</b>	<b>0.00</b>	Ecoregion: <b>EOLP</b> County: <b>SUMMIT CO</b> USEPA Reach Code: <b>04110002-</b>
WB Name: <b>CAMP CREEK</b>				
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>4.48</b>		

Assessment Cycle: **98**      Data Collection Period: **9607 to 9610**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>	None:	<b>4.48</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>4.4</b>	Very Poor: <b>0.0</b>				

**Comments:** This segment is impacted by urban runoff and combined sewer overflows from the City of Akron.

Causes of Impairment:

Unknown toxicity - H  
 Organic enrichment/DO - H

Sources of Impairment:

Combined Sewer Overflow - H  
 Urban Runoff/Storm Sewers (NPS) - H  
 Construction - M  
 Source Unknown - M

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	
<b>OH88 1.2</b>	<b>19-049</b>	<b>5.84</b>	<b>0.00</b>	Ecoregion: <b>EOLP</b> County: <b>SUMMIT CO</b> USEPA Reach Code: <b>04110002-</b>
WB Name: <b>OHIO CANAL</b>				
Aquatic Life Use(s): <b>MWH-C, LRW, MWH-C</b>		Segment Length: <b>5.84</b>		

Assessment Cycle: **98**      Data Collection Period: **9607 to 9610**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>	None:	<b>1.50</b>	Not Assessed:	<b>4.34</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>1.5</b>	Very Poor: <b>0.0</b>				

**Comments:** The Ohio Canal is a man-made channel. Combined sewer overflows (CSOs) enter this segment. The biological quality of this segment is poor. No future biological sampling is needed unless the CSOs are remediated.

Causes of Impairment:

Organic enrichment/DO - H  
 Total toxics - H

Sources of Impairment:

Combined Sewer Overflow - H  
 Urban Runoff/Storm Sewers (NPS) - H

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH88 1.5</b>	<b>19-075</b>	<b>2.35</b>	<b>0.00</b>	County: _____	
WB Name: <b>ROOSEVELT DITCH</b>				USEPA Reach Code: _____	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>2.35</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.35</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.3</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment currently does not have a use designation. Warmwater Habitat is recommended. Future monitoring is recommended to assess the stream after sewer line construction is completed and the stream has had a chance to recover.					
Causes of Impairment:			Sources of Impairment:		
Siltation - M		Sewer Line Construction - H			
Organic enrichment/DO - H		Urban Runoff/Storm Sewers (NPS) - H			
Total toxics - M					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH88 2</b>	<b>19-031</b>	<b>3.56</b>	<b>0.00</b>	County: <b>SUMMIT CO</b>	
WB Name: <b>SPRINGFIELD LAKE OUTLET</b>				USEPA Reach Code: <b>04110002-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>3.56</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>3.56</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>3.5</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> High fecal coliform levels were recorded in the stream. There are no known combined sewer overflows in this segment, so the source of coliforms is unknown.					
Causes of Impairment:			Sources of Impairment:		
Organic enrichment/DO - M		Urban Runoff/Storm Sewers (NPS) - H			
Total toxics - H					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH88 3</b>	<b>19-032</b>	<b>3.42</b>	<b>0.00</b>	County: <b>PORTAGE CO</b>	
WB Name: <b>WINGFOOT LAKE OUTLET</b>				USEPA Reach Code: <b>04110002-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>3.42</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>3.42</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>3.4</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment is not meeting Warmwater Habitat criteria. Combined sewer overflows and dams in the Little Cuyahoga River prevent recolonization into Wingfoot Lake Outlet. Recovery is not expected unless these problems are remediated.					
Causes of Impairment:			Sources of Impairment:		
Organic enrichment/DO - M		Channelization - H			
Siltation - H		Onsite wastewater systems (septic tanks) - H			
Other habitat alterations - S		Urban Runoff/Storm Sewers (NPS) - S			

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH88 4</b>	<b>19-030</b>	<b>17.40</b>	<b>11.00</b>	County: <b>PORTAGE CO</b>	
WB Name: <i>L. CUYAHOGA R. (HEADWATERS TO WINGFOOT LAKE OUT.)</i>				USEPA Reach Code: <b>04110002-002</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>6.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>1.00</b>	Not Assessed: <b>5.40</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>1.0</b>	Very Poor: <b>0.0</b>
Comments: One site downstream from Mogadore Reservoir was sampled in 1996. Results fell short of Warmwater Habitat criteria.			Sources of Impairment:		
Causes of Impairment: Organic enrichment/DO - H Nutrients - M			Natural - H Land development/Suburbanization - S Agriculture - S		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH88 4.1</b>	<b>19-050</b>	<b>3.05</b>	<b>0.00</b>	County: <b>SUMMIT CO</b>	
WB Name: <i>UNION OIL TRIB.</i>				USEPA Reach Code: <b>04110002-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>3.05</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>3.05</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>3.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: This segment is not meeting Warmwater Habitat criteria. Recovery is not expected unless combined sewer overflows and dams in the Little Cuyahoga River are remediated.			Sources of Impairment:		
Causes of Impairment: Other habitat alterations - H Organic enrichment/DO - M			Channelization - M Onsite wastewater systems (septic tanks) - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH88 5</b>	<b>19-001</b>	<b>56.80</b>	<b>42.30</b>	County:	
WB Name: <i>CUYAHOGA RIVER (CONGRESS LAKE OUT. TO L. CUYAHOGA)</i>				USEPA Reach Code: <b>04110002-004</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>14.50</b>			

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Assessment Cycle: **98**      Data Collection Period: **9696 to 9610**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>1.30</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>11.50</b>	None:	<b>2.00</b>	Not Assessed:	<b>0.00</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.0</b>	<b>1.3</b>	<b>13.5</b>	<b>0.0</b>	<b>0.0</b>				

**Comments:** This segment flows through Kent and Akron. Some residual effects are seen from Lake Rockwell hypolimnetic discharges, and flow from Breakneck Creek. Additional inputs are received from urban runoff, combined sewer overflows (CSOs), and 2 major WWTPs. Biological communities scored in the fair to good ranges, reflecting the effects of nutrient enrichment. Impacts are compounded by a series of impoundments throughout the segment. High gradient in the gorge area downstream from the Ohio Edison dam helps reduce some of the CSO influences. Full attainment of Warmwater Habitat was achieved at River mile 44.0.

**Causes of Impairment:**

**Sources of Impairment:**

- |  |   |
|--|---|
| Organic enrichment/DO - H<br>Nutrients - H<br>Flow alteration - H<br>Metals - S<br>Salinity/TDS/chlorides - S<br>Priority organics - S | Major Municipal Point Source - H<br>Hydromodification - H<br>Flow regulation/modification - M<br>Combined Sewer Overflow - M<br>Urban Runoff/Storm Sewers (NPS) - M<br>Minor Municipal Point Source - S<br>Spills - S |
|--|---|

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>
<b>OH88 8</b>	<b>19-028</b>	<b>18.50</b>	<b>0.00</b>	County: <b>PORTAGE CO</b>
WB Name: <b>BREAKNECK CREEK</b>				USEPA Reach Code: <b>04110002-005</b>
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>18.50</b>		

Assessment Cycle: **98**      Data Collection Period: **9606 to 9610**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full:	<b>9.50</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>2.00</b>	None:	<b>3.80</b>	Not Assessed:	<b>3.20</b>
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:				
	<b>0.0</b>	<b>9.5</b>	<b>2.0</b>	<b>3.8</b>	<b>0.0</b>				

**Comments:** The fish communities showed impacts from the Ravenna WWTP. Further declines were noted downstream from the Franklin Hills WWTP. The results suggest intermittently toxic conditions downstream from Ravenna which are increased as a result of the discharge from the Franklin Hills WWTP. Future monitoring is recommended to try to more clearly define causes and sources of biological impairment.

**Causes of Impairment:**

**Sources of Impairment:**

- |  |   |
|--|---|
| Unknown toxicity - H<br>Flow alteration - H<br>Organic enrichment/DO - M | Major Municipal Point Source - H<br>Minor Municipal Point Source - H<br>Natural - H |
|--|---|

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH88 9</b>	<b>19-042</b>	<b>2.15</b>	<b>0.00</b>	County: <b>PORTAGE CO</b>	
WB Name: <b>WAHOO DITCH</b>				USEPA Reach Code: <b>04110002-</b>	
Aquatic Life Use(s): <b>MWH-C</b>		Segment Length: <b>2.15</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9696 to 9610</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.15</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>2.1</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment has been extensively modified by channelization. The stream channel was choked with macrophytes, and substrates were several feet deep in silt and muck. Ammonia concentrations were elevated due to the Ravenna WWTP which discharges to Hommon Avenue Ditch. Sampling done in 1984 showed similar poor conditions upstream and downstream from Hommon Avenue Ditch.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H			Channelization - H		
Organic enrichment/DO - M			Major Municipal Point Source - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH88 10</b>	<b>19-029</b>	<b>6.43</b>	<b>0.00</b>	County: <b>PORTAGE CO</b>	
WB Name: <b>POTTER CREEK</b>				USEPA Reach Code: <b>04110002-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>6.43</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.00</b>	Not Assessed: <b>4.43</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment is recovering from the effects of past channelization. Sedimentation from agricultural runoff, and poor channel development are factors of non-attainment status.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H			Channelization - H		
Organic enrichment/DO - M			Agriculture - H		
Siltation - H					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH88 11</b>	<b>19-001</b>	<b>76.64</b>	<b>56.82</b>	County:	
WB Name: <i>CUYAHOGA RIVER (BLACK BROOK TO CONGESS LAKE OUT.)</i>					
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>19.82</b>	USEPA Reach Code: <b>04110002-010</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9609 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>12.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>1.00</b>	None: <b>0.90</b>	Not Assessed: <b>5.92</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>12.0</b>	Fair: <b>1.9</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The most severe section of non-attainment was immediately downstream from Lake Rockwell, associated with hypolimnetic dam releases. Upstream from Lake Rockwell there was a slight depression in the fish community. This may be a result of the Mantua WWTP discharge, or residual effects from the wetlands and dam releases in the next segment upstream.					
Causes of Impairment: Organic enrichment/DO - H			Sources of Impairment: Flow regulation/modification - H Minor Municipal Point Source - S		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH88 12</b>	<b>19-033</b>	<b>4.60</b>	<b>0.00</b>	County: <b>GEAUGA CO</b>	
WB Name: <i>BLACK BROOK</i>					
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>4.60</b>	USEPA Reach Code: <b>04110002-</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>2.60</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>2.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>2.6</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The biological communities were in full attainment of Warmwater Habitat criteria. Macroinvertebrate densities were extremely high, reflective of high background levels of suspended solids. Similar sharp increases in densities were observed in the Cuyahoga River immediately downstream from Black Brook.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH88 13</b>	<b>19-001</b>	<b>101.10</b>	<b>76.64</b>	County: <b>GEAUGA CO</b>	
WB Name: <i>CUYAHOGA RIVER (HEADWATERS TO BLACK BROOK)</i>					
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>24.46</b>	USEPA Reach Code: <b>04110002-011</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>12.40</b>	None: <b>2.00</b>	Not Assessed: <b>10.06</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>14.4</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Several factors were responsible for non-attainment and partial attainment status within this segment. Hypolimnetic dam releases, wetland drainage, sluggish flow, and historic channelization were major influences on biological and water quality conditions. Dissolved oxygen violations were common throughout the segment.					
Causes of Impairment: Organic enrichment/DO - H Other habitat alterations - H			Sources of Impairment: Flow regulation/modification - H Natural - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>EOLP</b>
<b>OH88 13</b>	<b>19-001</b>	<b>101.10</b>	<b>76.64</b>	County:	<b>GEAUGA CO</b>
WB Name: <b>CUYAHOGA RIVER (HEADWATERS TO BLACK BROOK)</b>				USEPA Reach Code:	<b>04110002-011</b>
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>24.46</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9606 to 9610</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>24.46</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Several factors were responsible for non-attainment and partial attainment status within this segment. Hypolimnetic dam releases, wetland drainage, sluggish flow, and historic channelization were major influences on biological and water quality conditions. Dissolved oxygen violations were common throughout the segment.					

Flow alteration - S

Channelization - M

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>EOLP</b>
<b>OH88 13.4</b>	<b>19-073</b>	<b>1.47</b>	<b>0.00</b>	County:	
WB Name: <b>TRIB. TO CUYAHOGA R. (RM 93.65)</b>				USEPA Reach Code:	
Aquatic Life Use(s):	<b>NONE</b>	Segment Length:	<b>1.47</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9610 to 9610</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>1.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.47</b>
Narrative Assessment:	Excellent: <b>1.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is a small headwaters stream which flows through pastures and wetlands. A large (11 acre) beaver dam pond is located near its origin. This segment is threatened due to proposed power line construction and right-of-way maintenance.					

Causes of Impairment:

Sources of Impairment:

Siltation - T

Construction - T

Other habitat alterations - T

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>EOLP</b>
<b>OH88 15</b>	<b>19-035</b>	<b>14.70</b>	<b>0.00</b>	County:	<b>GEAUGA CO</b>
WB Name: <b>BRIDGE CREEK</b>				USEPA Reach Code:	<b>04110002-</b>
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>14.70</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9606 to 9610</b>	Assessment Age:	<b>Current</b>
Aquatic Life Use Attainment:					
Full:	<b>1.50</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>4.50</b>
					Not Assessed: <b>8.70</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>1.5</b>	Fair: <b>4.5</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Biological and water quality conditions are primarily influenced by wetlands in the headwaters. Water releases and wetland conditions are influences downstream from LaDue Reservoir in the lower 2.2 miles.					
Causes of Impairment:			Sources of Impairment:		
Organic enrichment/DO - H			Flow regulation/modification - H		
Flow alteration - M			Natural - H		
			Natural - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:		
<b>OH88 16</b>	<b>19-036</b>	<b>14.60</b>	<b>0.00</b>		Ecoregion: <b>EOLP</b>
WB Name: <b>WEST BRANCH CUYAHOGA RIVER</b>					County: <b>GEAUGA CO</b>
Aquatic Life Use(s): <b>WWH</b>					USEPA Reach Code: <b>04110002-</b>
Segment Length: <b>14.60</b>					
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9309 to 9610</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>3.50</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>2.00</b>
				None:	<b>2.00</b>
					Not Assessed: <b>7.10</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>3.5</b>	Fair: <b>4.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Full attainment in the upper portion of this segment is based on sampling done in 1993. The lower portion near the mouth was sampled in 1996. Fish and macroinvertebrate communities were both rated good. Wetlands throughout the basin have significant influence on the biological communities.					
<b>Causes of Impairment:</b>			<b>Sources of Impairment:</b>		
Flow alteration - H			Natural - H		
Organic enrichment/DO - H					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:		
<b>OH89 1</b>	<b>19-001</b>	<b>7.20</b>	<b>0.00</b>		Ecoregion: <b>EOLP</b>
WB Name: <b>CUYAHOGA RIVER (SHIP CHANNEL TO LAKE ERIE)</b>					County: <b>CUYAHOGA CO</b>
Aquatic Life Use(s): <b>WWH, WWH-E</b>					USEPA Reach Code: <b>04110002-001</b>
Segment Length: <b>7.20</b>					
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9607 to 9610</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>1.61</b>
					Not Assessed: <b>5.59</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>1.6</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Conditions in this segment have remained stable since 1991. The fish communities remained in the poor range while the macroinvertebrates scored in the fair range.					
<b>Causes of Impairment:</b>			<b>Sources of Impairment:</b>		
Organic enrichment/DO - H			Combined Sewer Overflow - H		
Unknown toxicity - H			Spills - H		
Other habitat alterations - M			Urban Runoff/Storm Sewers (NPS) - M		
			Channelization - M		
			Municipal Point Sources - M		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH89 1</b>	<b>19-001</b>	<b>7.20</b>	<b>0.00</b>	County: <b>CUYAHOGA CO</b>	
WB Name: <b>CUYAHOGA RIVER (BIG CREEK TO SHIP CHANNEL)</b>				USEPA Reach Code: <b>04110002-001</b>	
Aquatic Life Use(s): <b>WWH, WWH-E</b>		Segment Length: <b>7.20</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>1.59</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>4.00</b>	None: <b>0.00</b>	Not Assessed: <b>1.61</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>1.5</b>	Very Poor: <b>4.0</b>
<p><b>Comments:</b> Chemical water quality has shown improvements since the closing of the LTV coking facilities. However, biological communities remain in the poor and very poor range as a result of severe habitat limitations associated with the stream channel being dredged to a depth of 25 feet. Elevated background levels of ammonia appear to be related to ammonification of nitrates in the anoxic, soft sediments of the deep channel.</p> <p>Causes of Impairment: Unionized Ammonia - H Organic enrichment/DO - M Other habitat alterations - H Zinc - S</p> <p>Sources of Impairment: Dredging - H Contaminated sediments - H Combined Sewer Overflow - M Spills - M Urban Runoff/Storm Sewers (NPS) - M Major Industrial Point Source - S</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH89 5</b>	<b>19-005</b>	<b>12.00</b>	<b>0.00</b>	County: <b>CUYAHOGA CO</b>	
WB Name: <b>BIG CREEK</b>				USEPA Reach Code: <b>04110002-014</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>12.00</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>8.00</b>	Not Assessed: <b>4.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>3.0</b>	Poor: <b>5.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> Water quality has improved compared to the grossly polluted conditions documented in the early 1980's. The biological communities are still in non-attainment of Warmwater Habitat criteria. Urban runoff and spills continue to be a major problem within the basin. Sanitary sewer overflows have been recorded, but many are due to breaks or blockages. Oil contamination from Research Oil Company may contribute to impacts near the mouth.</p> <p>Causes of Impairment: Organic enrichment/DO - H Flow alteration - M Cause Unknown - S Oil and grease - M</p> <p>Sources of Impairment: Combined Sewer Overflow - H Urban Runoff/Storm Sewers (NPS) - M Spills - S Other - M</p>					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH89 6</b>	<b>19-001</b>	<b>16.40</b>	<b>7.20</b>	County: <b>CUYAHOGA CO</b>	
WB Name: <b>CUYAHOGA RIVER (TINKERS CREEK TO BIG CREEK)</b>				USEPA Reach Code: <b>04110002-001</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>9.20</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>9.20</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>9.2</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> Point source influences in this segment include Cleveland Southerly WWTP, miscellaneous sources throughout the Cleveland metropolitan area, and residual effects from Akron. The fish communities throughout the segment were poor. Slight recovery was observed upstream from the Southerly WWTP, but impacts were again noted downstream. Nutrient and zinc concentrations increased downstream from the WWTP, above the already elevated levels present in the stream.</p> <p>Causes of Impairment:</p> <p>Organic enrichment/DO - H Unknown toxicity - H Zinc - M Siltation - S</p> <p>Sources of Impairment:</p> <p>Municipal Point Sources - H Combined Sewer Overflow - H Spills - M Urban Runoff/Storm Sewers (NPS) - M</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH89 7</b>	<b>19-006</b>	<b>12.20</b>	<b>0.00</b>	County: <b>CUYAHOGA CO</b>	
WB Name: <b>MILL CREEK</b>				USEPA Reach Code: <b>04110002-019</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>12.20</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>5.00</b>	Not Assessed: <b>7.20</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>5.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> This segment has improved compared to the grossly polluted conditions documented in the early 1980's. A sanitary sewer line break that influenced biological communities in 1991 was repaired, but fish and macroinvertebrates remained in non-attainment status in 1996. Combined sewer overflows, urban runoff and spills are still significant sources of impacts.</p> <p>Causes of Impairment:</p> <p>Organic enrichment/DO - H Other habitat alterations - H Cause Unknown - M</p> <p>Sources of Impairment:</p> <p>Combined Sewer Overflow - H Spills - H Urban Runoff/Storm Sewers (NPS) - H Landfills - S</p>					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH89 8</b>	<b>19-007</b>	<b>22.50</b>	<b>0.00</b>	County:	
WB Name: <i>TINKERS CREEK (POND BROOK TO CUYAHOGA RIVER)</i>				USEPA Reach Code: <b>04110002-021</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>22.50</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>22.50</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>22.5</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Stream conditions have remained consistent with the 1991 survey results. Only one site near the mouth was sampled in 1996.					
Causes of Impairment:			Sources of Impairment:		
Organic enrichment/DO - H			Municipal Point Sources - H		
Nutrients - S			Urban Runoff/Storm Sewers (NPS) - S		
Siltation - S			Source Unknown - S		
Cause Unknown - S			Spills - S		
Suspended solids - S					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH89 10.2</b>	<b>19-070</b>	<b>2.58</b>	<b>0.00</b>	County: <b>PORTAGE CO</b>	
WB Name: <i>TRIB. TO TRIB. TO POND BROOK (ROTEK TRIBUTARY)</i>				USEPA Reach Code: <b>04110002-</b>	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>2.58</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9509</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.50</b>	Not Assessed: <b>0.08</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>2.5</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This small stream was sampled because of oily sediments in the channel originating from the Rotek Co. The stream was degraded in 1993, but showed signs of recovery in 1995 after oily sediments were removed.					
Causes of Impairment:			Sources of Impairment:		
Oil and grease - H			Other Urban Runoff - H		
Flow alteration - M					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH89 10.3</b>	<b>19-071</b>	<b>2.92</b>	<b>0.00</b>	County: <b>PORTAGE CO</b>	
WB Name: <i>TRIB. TO TRIB. TO POND BROOK (AURORA COMMONS)</i>					
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>2.92</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9509</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	Full, But Threatened:	Partial:	None:	Not Assessed:	
<b>0.00</b>	<b>2.90</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>0.0</b>	<b>2.9</b>	<b>0.0</b>	<b>0.0</b>
<b>Comments:</b> Development in the area has sent large amounts of silt into the stream, resulting in negative impacts on the macroinvertebrate community.					
Causes of Impairment:			Sources of Impairment:		
Siltation - T			Land development/Suburbanization - T		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH89 11</b>	<b>19-001</b>	<b>24.20</b>	<b>16.40</b>	County: <b>SUMMIT CO</b>	
WB Name: <i>CUYAHOGA RIVER (BRANDYWINE CREEK TO TINKERS CREEK)</i>					
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>7.80</b>			
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9606 to 9610</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	Full, But Threatened:	Partial:	None:	Not Assessed:	
<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.80</b>	<b>0.00</b>	
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:
	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>7.8</b>	<b>0.0</b>
<b>Comments:</b> The biological quality in this segment has remained constant since 1991. The macroinvertebrate communities continue to recover downstream from Akron, but the fish communities remain in the poor and very poor ranges. Nutrient levels were elevated well downstream from Akron. Increasing levels of suspended solids suggest nonpoint source inputs from adjacent watersheds. Increased incidences of DELT anomalies in the fish suggest continued chronic influences originating from the Akron area.					
Causes of Impairment:			Sources of Impairment:		
Organic enrichment/DO - H			Municipal Point Sources - H		
Siltation - S			Combined Sewer Overflow - H		
Unknown toxicity - H			Urban Runoff/Storm Sewers (NPS) - M		
Zinc - M			Natural - S		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>
<b>OH89 12</b>	<b>19-009</b>	<b>8.20</b>	<b>0.00</b>	County:
WB Name: <b>CHIPPEWA CREEK</b>				USEPA Reach Code: <b>04110002-</b>
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>8.20</b>		

Assessment Cycle: **98**      Data Collection Period: **9606 to 9610**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full: <b>2.30</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>4.30</b>	Not Assessed: <b>1.60</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>2.3</b>	Fair: <b>2.3</b>	Poor: <b>2.0</b>
				Very Poor: <b>0.0</b>

**Comments:** This segment was evaluated in a cooperative study between Ohio EPA and the Cuyahoga County Health Department. The Health Department attributed lack of attainment in the upper watershed to bacteria from septic systems, although no violations of water quality standards were noted. No improvements were observed in the upper watershed despite the elimination of some small WWTPs. Waterfalls along the stream may prevent the recolonization of fish. The fish community near the mouth (downstream from migration barriers) has improved significantly since 1984.

Causes of Impairment:

- Organic enrichment/DO - H
- Cause Unknown - H
- Other habitat alterations - H

Sources of Impairment:

- Onsite wastewater systems (septic tanks) - H
- Urban Runoff/Storm Sewers (NPS) - M
- Natural - H

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>
<b>OH89 13</b>	<b>19-010</b>	<b>11.50</b>	<b>0.00</b>	County: <b>SUMMIT CO</b>
WB Name: <b>BRANDYWINE CREEK</b>				USEPA Reach Code: <b>04110002-015</b>
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>11.50</b>		

Assessment Cycle: **98**      Data Collection Period: **9606 to 9610**      Assessment Age: **Current**  
 Aquatic Life Use Attainment:

Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>8.00</b>	Not Assessed: <b>3.50</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>8.0</b>	Poor: <b>0.0</b>
				Very Poor: <b>0.0</b>

**Comments:** The Hudson WWTP is the major source of impacts in this segment. Historical sampling in 1984 showed the entire length of stream to be in non-attainment status. After upgrades to the WWTP in 1990, water quality conditions improved substantially. However, biological sampling done in 1996 downstream from the WWTP showed impacts and non-attainment similar to 1984 levels. Future monitoring is recommended after the Hudson WWTP ties into the NEORSR interceptor sewer.

Causes of Impairment:

Sources of Impairment:

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH89 14</b>	<b>19-001</b>	<b>37.20</b>	<b>24.20</b>	County: <b>SUMMIT CO</b>	
WB Name: <b>CUYAHOGA RIVER (YELLOW CREEK TO BRANDYWINE CREEK)</b>				USEPA Reach Code: <b>04110002-001</b>	
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>13.00</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9606 to 9610</b>	Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>13.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>13.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The biological and water quality of this segment have remained constant, with no significant changes since 1991. The macroinvertebrates show recovery downstream from the Akron WWTP, but the fish community remains in the poor range.					
Causes of Impairment:			Sources of Impairment:		
Organic enrichment/DO - H			Major Municipal Point Source - H		
Unknown toxicity - H			Combined Sewer Overflow - H		
Siltation - S			Urban Runoff/Storm Sewers (NPS) - M		
Priority organics - S			Natural - S		
Zinc - M					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH89 24</b>	<b>19-020</b>	<b>10.40</b>	<b>0.00</b>	County: <b>SUMMIT CO</b>	
WB Name: <b>FURNACE RUN</b>				USEPA Reach Code: <b>04110002-018</b>	
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>10.40</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9606 to 9610</b>	Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>2.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>8.40</b>
Narrative Assessment:	Excellent: <b>2.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The biological communities continue to score in the very good to exceptional ranges. Sediment sampling revealed low levels of most metals except copper. Copper was among the most commonly elevated metal in sediments in the Cuyahoga River basin. No specific source of copper in Furnace Run is known.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH89 24.1</b>	<b>19-076</b>	<b>1.38</b>	<b>0.00</b>	County: _____	
WB Name: <i>TRIB. TO FURNACE RUN (RM 7.90)</i>					
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>1.38</b>		USEPA Reach Code: _____	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9607 to 9607</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>1.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.38</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>1.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This is a small, high-gradient stream which previously had no use designation. Fish communities scored in the very good range (IBI=48). Habitat was sufficient to support a Warmwater Habitat biological community. This forested watershed is threatened by land application of sewage from a proposed housing project.					
Causes of Impairment:			Sources of Impairment:		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH89 25</b>	<b>19-021</b>	<b>10.30</b>	<b>0.00</b>	County: <b>SUMMIT CO</b>	
WB Name: <i>YELLOW CREEK</i>					
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>10.30</b>		USEPA Reach Code: <b>04110002-022</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>4.60</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>5.70</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>4.6</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The lower portion of this segment has remained stable, attaining Warmwater Habitat criteria and being indicative of good water quality.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH89 26</b>	<b>19-022</b>	<b>6.40</b>	<b>0.00</b>	County: <b>SUMMIT CO</b>	
WB Name: <i>NORTH FORK YELLOW CREEK</i>					
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>6.40</b>		USEPA Reach Code: <b>04110002-</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9507</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>6.10</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.30</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>6.1</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment was sampled at one location upstream from the Robinwood Hills WWTP. Fish results indicate significant improvement since 1991. The macroinvertebrates were rated good based on qualitative sampling results. The North Fork downstream from the WWTP was not monitored, but slight impacts were noted on Yellow Creek downstream from this tributary.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH89 27</b>	<b>19-001</b>	<b>42.30</b>	<b>37.20</b>	County: <b>SUMMIT CO</b>	
WB Name: <i>CUYAHOGA RIVER (LITTLE CUYAHOGA R. TO YELLOW CR.)</i>				USEPA Reach Code: <b>04110002-001</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>5.10</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>5.10</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>2.0</b>	Poor: <b>3.1</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> The biological communities are reflective of organic enrichment and chronic toxic influences, originating from urban runoff and combined sewer overflows from Akron, along with the Akron WWTP. Sewer overflows and bypasses contribute significant loadings of metals, solids, and fecal coliform bacteria. Conditions in this segment were similar to those recorded in 1991, and have remained impaired for decades.</p> <p>Causes of Impairment:</p> <ul style="list-style-type: none"> <li>Organic enrichment/DO - H</li> <li>Zinc - M</li> <li>Unknown toxicity - H</li> <li>Priority organics - S</li> </ul> <p>Sources of Impairment:</p> <ul style="list-style-type: none"> <li>Combined Sewer Overflow - H</li> <li>Major Municipal Point Source - H</li> <li>Urban Runoff/Storm Sewers (NPS) - M</li> <li>Spills - M</li> </ul>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH89 27.2</b>	<b>19-072</b>	<b>2.81</b>	<b>0.00</b>	County:	
WB Name: <i>SAND RUN</i>				USEPA Reach Code:	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>2.81</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Assessment Age: <b>Current</b>		Aquatic Life Use Attainment:	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>2.00</b>	Not Assessed: <b>0.81</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>2.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> This stream is a small, flashy, high-gradient headwaters stream. Though it flows through a metropark in the lower reaches, it is highly influenced by urbanization from the suburb of Fairlawn in the uplands. Poor biological communities were present. Severe bank erosion, embedded substrates and channel destabilization were evidence of flashy flows from urban runoff.</p> <p>Causes of Impairment:</p> <ul style="list-style-type: none"> <li>Flow alteration - H</li> </ul> <p>Sources of Impairment:</p> <ul style="list-style-type: none"> <li>Urban Runoff/Storm Sewers (NPS) - H</li> </ul>					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>EOLP</b>
<b>OH89 29</b>	<b>19-024</b>	<b>11.00</b>	<b>0.00</b>	County:	<b>SUMMIT CO</b>
WB Name: <b>MUD BROOK</b>				USEPA Reach Code:	<b>04110002-020</b>
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>11.00</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>1.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>10.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>1.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The lower section of this stream is one of the few Akron area streams which attains Warmwater Habitat criteria (near the mouth). Historical sampling in the headwaters showed poor water quality in the vicinity of Powers Brook and the Summit County #6 WWTP.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>EOLP</b>
<b>OH90 5</b>	<b>15-001</b>	<b>5.00</b>	<b>0.00</b>	County:	<b>LAKE CO</b>
WB Name: <b>CHAGRIN RIVER (EAST BRANCH TO LAKE ERIE)</b>				USEPA Reach Code:	<b>04110003-005</b>
Aquatic Life Use(s): <b>WWH, WWH-E</b>		Segment Length: <b>5.00</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Assessment Age: <b>Current</b>			
Aquatic Life Use Attainment:					
Full: <b>0.00</b>	Full, But Threatened: <b>3.00</b>	Partial: <b>0.00</b>	None: <b>2.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>3.0</b>	Fair: <b>0.0</b>	Poor: <b>2.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> In the free-flowing section from the East Branch to river mile 1.4, the main concerns are related to suburbanization. Stormwater runoff contributes high levels of fecal coliforms and suspended solids. The estuary portion is threatened by widespread habitat destruction from marina construction, dredging, riparian vegetation removal, and channelization.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H			MARINA(s) - H		
Siltation - S			Urban Runoff/Storm Sewers (NPS) - M		
Pathogens - T			Dredging - M		
Organic enrichment/DO - S			Removal of riparian vegetation - M		
Organic enrichment/DO - T			Urban Runoff/Storm Sewers (NPS) - T		
			Onsite wastewater systems (septic tanks) - T		
			Contaminated sediments - T		
			Land development/Suburbanization - M		
			Land development/Suburbanization - T		
			Contaminated sediments - S		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH90 7</b>	<b>15-001</b>	<b>27.10</b>	<b>5.00</b>	County:	
WB Name: <i>CHAGRIN RIVER (AURORA BRANCH TO EAST BRANCH)</i>					
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>22.10</b>		USEPA Reach Code: <b>04110003-005</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>		Assessment Age: <b>Current</b>		
Aquatic Life Use Attainment:					
Full: <b>0.00</b>	Full, But Threatened: <b>15.20</b>	Partial: <b>6.90</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>15.2</b>	Fair: <b>6.9</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>

**Comments:** The Chagrin Falls WWTP and Ivex both discharge to the stream immediately upstream from this segment. Both outfalls contributes loads of organic matter and nutrients to the stream. Urban and suburban runoff is contributing heavier silt loads than in the past. Erosion is becoming more of a problem due to the flashy nature of stormwater runoff. The stream is currently attaining Warmwater Habitat standards. Habitat, and potential within the existing ecological community, suggest it could be supporting a biological community of higher quality.

Causes of Impairment:

Sources of Impairment:

- Organic enrichment/DO - H
- Siltation - S
- Organic enrichment/DO - T
- Siltation - T
- Metals - T
- Mercury - M
- Pathogens - T
- Nutrients - T

- Major Industrial Point Source - M
- Major Industrial Point Source - T
- Land development/Suburbanization - H
- Urban Runoff/Storm Sewers (NPS) - H
- Land development/Suburbanization - T
- Onsite wastewater systems (septic tanks) - M
- Major Municipal Point Source - H
- Urban Runoff/Storm Sewers (NPS) - T
- Onsite wastewater systems (septic tanks) - T
- Minor Municipal Point Source - M
- Minor Municipal Point Source - T
- Major Municipal Point Source - S
- Major Municipal Point Source - T

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH90 7.3</b>	<b>15-012</b>	<b>3.65</b>	<b>0.00</b>	County:	
WB Name: <i>TRIB TO CHAGRIN 15.4</i>					
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>3.65</b>		USEPA Reach Code: <b>04110003-</b>	
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>		Assessment Age: <b>Current</b>		
Aquatic Life Use Attainment:					
Full: <b>1.00</b>	Full, But Threatened: <b>2.65</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>3.6</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>

**Comments:** This is a small Coldwater Habitat stream with many sensitive macroinvertebrate taxa and young rainbow trout in it. It is threatened by suburban expansion and the subsequent stormwater runoff which will occur.

Causes of Impairment:

Sources of Impairment:

- Siltation - T
- Thermal modifications - T
- Metals - T

- Land development/Suburbanization - T
- Onsite wastewater systems (septic tanks) - T

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH90 7.4</b>	<b>15-017</b>	<b>3.10</b>	<b>0.00</b>	County: <b>CUYAHOGA CO</b>	
WB Name: <i>TRIB. TO CHAGRIN R. (RM 14.88)</i>				USEPA Reach Code: <b>04110003-</b>	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>3.10</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>3.10</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>3.1</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream is ravaged by stormwater runoff. Metals contamination in the sediments is strongly suspected as a cause of impairment. Future monitoring is recommended to assess the impacts within this stream.					
Causes of Impairment:			Sources of Impairment:		
Flow alteration - H			Urban Runoff/Storm Sewers (NPS) - H		
Cause Unknown - H			Other Urban Runoff - H		
			Source Unknown - H		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH90 7.5</b>	<b>15-018</b>	<b>5.94</b>	<b>0.00</b>	County: <b>CUYAHOGA CO</b>	
WB Name: <i>TRIB. TO CHAGRIN R. (RM 22.81)</i>				USEPA Reach Code: <b>04110003-</b>	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>5.94</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>5.94</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.9</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Several small WWTPs are located in this basin, some of which are operating poorly. Urban and suburban development threaten this segment. The fish community scored in the exceptional range. Macroinvertebrates only scored marginally good.					
Causes of Impairment:			Sources of Impairment:		
Siltation - T			Land development/Suburbanization - T		
Nutrients - H			Minor Municipal Point Source - H		
Pathogens - T			Package Plants (Small Flows) - H		
Chlorine - M					
Organic enrichment/DO - H					
Suspended solids - M					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:		
<b>OH90 7.51</b>	<b>15-019</b>	<b>1.74</b>	<b>0.00</b>		Ecoregion: <b>EOLP</b>
WB Name: <i>TRIB. TO TRIB. TO CHAGRIN R. (RM 22.81/2.17)</i>					County: <b>CUYAHOGA CO</b>
Aquatic Life Use(s): <b>NONE</b>					USEPA Reach Code: <b>04110003-</b>
Segment Length: <b>1.74</b>					
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9506 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>1.74</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>1.7</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>

**Comments:** This stream is threatened by urban/suburban development. Flashy runoff from storm sewers is causing erosion problems.

Causes of Impairment:

- Siltation - T
- Flow alteration - T
- Nutrients - T
- Organic enrichment/DO - T

Sources of Impairment:

- Minor Municipal Point Source - T
- Urban Runoff/Storm Sewers (NPS) - T

WBID #:	River Code:	Upper River Mile:	Lower River Mile:		
<b>OH90 8</b>	<b>15-003</b>	<b>6.10</b>	<b>0.00</b>		Ecoregion: <b>EOLP</b>
WB Name: <i>GRISWOLD CREEK</i>					County:
Aquatic Life Use(s): <b>EWH</b>					USEPA Reach Code: <b>04110003-009</b>
Segment Length: <b>6.10</b>					
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9506 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>5.20</b>	Partial:	<b>0.90</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.2</b>	Fair: <b>0.9</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>

**Comments:** Failing septic systems were noted by the Ohio EPA at river mile 0.9. A recent report by a consulting firm also noted septic systems as a problem at sites further upstream.

Causes of Impairment:

- Organic enrichment/DO - H
- Flow alteration - S
- Nutrients - S
- Pathogens - S
- Organic enrichment/DO - T
- Flow alteration - T
- Nutrients - T
- Pathogens - T

Sources of Impairment:

- Onsite wastewater systems (septic tanks) - H
- Land development/Suburbanization - S
- Streambank modification/destabilization - M
- Minor Municipal Point Source - T
- Dredge mining - T
- Onsite wastewater systems (septic tanks) - T
- Land development/Suburbanization - T
- Urban Runoff/Storm Sewers (NPS) - T

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:		
<b>OH90 9</b>	<b>15-004</b>	<b>5.58</b>	<b>0.00</b>		Ecoregion: <b>EOLP</b>
WB Name: <b>WILLEY CREEK</b>					County:
Aquatic Life Use(s): <b>EWH</b> Segment Length: <b>5.58</b>					USEPA Reach Code: <b>04110003-</b>
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9506 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>5.58</b>	Partial:	<b>0.00</b>
	<b>0.00</b>		<b>0.00</b>	None:	<b>0.00</b>
	<b>0.00</b>		<b>0.00</b>		<b>0.00</b>
	<b>0.00</b>		<b>0.00</b>		<b>0.00</b>
	<b>0.00</b>		<b>0.00</b>		<b>0.00</b>
	<b>0.00</b>		<b>0.00</b>		<b>0.00</b>
Narrative Assessment: <b>0.0</b> Excellent: <b>0.0</b> Good: <b>5.5</b> Fair: <b>0.0</b> Poor: <b>0.0</b> Very Poor: <b>0.0</b>					
<b>Comments:</b> Willey Creek drains the west side of the Chagrin River in the area where urban/suburban development is the highest. This segment is threatened due to increasing loads from WWTPs and runoff from development.					
Causes of Impairment:			Sources of Impairment:		
Siltation - T			Highway/road/bridge/sewer line - T		
Other habitat alterations - T			Land development/Suburbanization - T		
Flow alteration - T			Minor Municipal Point Source - T		
Thermal modifications - T			Package Plants (Small Flows) - T		
Organic enrichment/DO - T					
Suspended solids - T					
Nutrients - T					
Chlorine - T					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:		
<b>OH90 10</b>	<b>15-005</b>	<b>18.44</b>	<b>0.00</b>		Ecoregion: <b>EOLP</b>
WB Name: <b>AURORA BRANCH</b>					County:
Aquatic Life Use(s): <b>WWH</b> Segment Length: <b>18.44</b>					USEPA Reach Code: <b>04110003-006</b>
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9506 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>13.75</b>	Partial:	<b>2.28</b>
	<b>0.00</b>		<b>13.75</b>	None:	<b>1.27</b>
	<b>0.00</b>		<b>13.75</b>		<b>1.27</b>
	<b>0.00</b>		<b>13.75</b>		<b>1.27</b>
	<b>0.00</b>		<b>13.75</b>		<b>1.27</b>
	<b>0.00</b>		<b>13.75</b>		<b>1.27</b>
Narrative Assessment: <b>0.0</b> Excellent: <b>0.0</b> Good: <b>13.7</b> Fair: <b>2.8</b> Poor: <b>0.6</b> Very Poor: <b>0.0</b>					
<b>Comments:</b> Increased discharges from 2 WWTPs in this segment are effecting the streams assimilative capacity. Numerous residential lots, along with small farms, are encroaching on or eliminating the riparian vegetation. On-site sewage disposal systems are also causing problems. In the upper reaches, a sewer line break from the Aurora Central WWTP caused impairment to the biological community. A small campground in the headwaters likely affects chemical and biological quality of the stream.					
Causes of Impairment:			Sources of Impairment:		
Nutrients - M			Onsite wastewater systems (septic tanks) - M		
Organic enrichment/DO - H			Major Municipal Point Source - S		
Other habitat alterations - M			Streambank modification/destabilization - M		
Other habitat alterations - T			Removal of riparian vegetation - M		
Siltation - M			Streambank modification/destabilization - T		
Nutrients - M			Removal of riparian vegetation - T		
Noxious aquatic plants - M			Major Municipal Point Source - T		
Pesticides - S			Recreational activities - T		
Chlorine - H			Package Plants (Small Flows) - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH90 10.2</b>	<b>15-023</b>	<b>3.31</b>	<b>0.00</b>	County:	
WB Name: <b>SUNNY LAKE OUTLET</b>				USEPA Reach Code: <b>04110003-</b>	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>3.31</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9606 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>2.10</b>	Partial: <b>1.21</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>2.1</b>	Fair: <b>1.2</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: Periodic algal blooms occur in this segment. The disappearance or avoidance of darter species in Sunny Lake Outlet, as well as on Aurora Branch downstream from the confluence, indicate problems in Sunny Lake Outlet. Sensitive fish species were noted upstream from the confluence, but tolerant fish and macroinvertebrates were collected downstream.			Sources of Impairment:		
Causes of Impairment:			Sources of Impairment:		
Noxious aquatic plants - H Flow alteration - S			Upstream impoundment - H Other Urban Runoff - T Waste storage/storage tank leaks - T Natural - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH90 10.3</b>	<b>15-022</b>	<b>2.60</b>	<b>0.00</b>	County:	
WB Name: <b>LINTON CREEK</b>				USEPA Reach Code: <b>04110003-</b>	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>2.60</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>2.60</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>2.6</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: This is a small wooded stream which has many coldwater attributes. Poor sewage treatment by the Pilgrim Village WWTP was causing impacts in the upper portion of this segment. This plant is scheduled to be diverted to the McFarland Creek WWTP. Living Homes WWTP also discharges in this segment and will not be diverted. Despite the two treatment plants, coldwater and sensitive macroinvertebrate taxa were collected near the mouth. Kenston Lake dam recently broke, sending sediments downstream and knocking down trees (debris was observed at the mouth).			Sources of Impairment:		
Causes of Impairment:			Sources of Impairment:		
Organic enrichment/DO - T Nutrients - T Pathogens - T			Minor Municipal Point Source - T Land development/Suburbanization - T		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH90 11</b>	<b>15-006</b>	<b>5.80</b>	<b>0.00</b>	County:	
WB Name: <b>MCFARLAND CREEK</b>				USEPA Reach Code: <b>04110003-010</b>	
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>5.80</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>5.80</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.8</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Heavy sedimentation occurred during the construction of Route 422. Embeddedness of instream substrates, and riffle instability were problems during the time of sampling. Continued development within the basin threatens the biological and water quality of this stream. The stream was dry for 4 weeks in 1994 during the time Cannon Lake was being filled.					
<b>Causes of Impairment:</b>			<b>Sources of Impairment:</b>		
Siltation - M			Land development/Suburbanization - M		
Other habitat alterations - H			Highway/road/bridge/sewer line - H		
Flow alteration - H			Upstream impoundment - H		
Pathogens - T			Drainage/filling of wetlands - H		
Filling and draining - H					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH90 12</b>	<b>15-001</b>	<b>51.47</b>	<b>27.09</b>	County:	
WB Name: <b>CHAGRIN RIVER (HEADWATERS TO AURORA BRANCH)</b>				USEPA Reach Code: <b>04110003-007</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>24.38</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>23.78</b>	Partial: <b>0.60</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>23.7</b>	Fair: <b>0.6</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The effluent discharge from Ivex is the prime cause of partial attainment in the lower end of this segment. Suburban development in the upper portion threatens biological communities. The upper reaches exhibit characteristics of Coldwater Habitat. Development, coupled with riparian losses, could affect instream temperatures and thus become a critical factor. Future biological monitoring is recommended to track potential impacts from development.					
<b>Causes of Impairment:</b>			<b>Sources of Impairment:</b>		
Mercury - H			Major Industrial Point Source - T		
Pathogens - M			Onsite wastewater systems (septic tanks) - M		
Siltation - T			Onsite wastewater systems (septic tanks) - T		
Nutrients - T			Land development/Suburbanization - T		
Organic enrichment/DO - H			Major Industrial Point Source - H		
Chlorine - M			Contaminated sediments - M		
Nutrients - T			Contaminated sediments - T		
Pathogens - T					
Suspended solids - M					
Unionized Ammonia - H					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH90 13</b>	<b>15-007</b>	<b>6.60</b>	<b>0.00</b>	County:	
WB Name: <b>SILVER CREEK</b>				USEPA Reach Code: <b>04110003-011</b>	
Aquatic Life Use(s): <b>CWH</b>		Segment Length: <b>6.60</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>3.30</b>	Partial: <b>3.30</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>3.3</b>	Good: <b>3.3</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream showed many characteristics of Coldwater Habitat.					
Causes of Impairment:			Sources of Impairment:		
Flow alteration - M			Natural - H		
Thermal modifications - T			Hydromodification - S		
Siltation - M			Urban Runoff/Storm Sewers (NPS) - T		
Flow alteration - T			Land development/Suburbanization - T		
Thermal modifications - H			Upstream impoundment - T		
Siltation - T					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH90 13.1</b>	<b>15-025</b>	<b>4.64</b>	<b>0.00</b>	County: <b>GEAUGA CO</b>	
WB Name: <b>SOUTH BRANCH SILVER CREEK</b>				USEPA Reach Code: <b>04110003-</b>	
Aquatic Life Use(s): <b>NONE</b>		Segment Length: <b>4.64</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9407 to 9409</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>4.64</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>4.6</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Development in the upper portion of this stream have resulted in a slight decrease in water quality. Impoundments and suburban development have changed the flow dynamics. Riparian protection should allow Silver Creek to remain a coldwater stream. Brook trout (stocked) are present in this stream.					
Causes of Impairment:			Sources of Impairment:		
Nutrients - T			Upstream impoundment - T		
Flow alteration - T			Land development/Suburbanization - T		
Organic enrichment/DO - T			Hydromodification - T		
Thermal modifications - T					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH90 14</b>	<b>15-008</b>	<b>5.00</b>	<b>0.00</b>	County:	
WB Name: <b>BEAVER CREEK</b>				USEPA Reach Code: <b>04110003-</b>	
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>5.00</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>5.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>5.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> This stream flows through wetlands, and contains beaver dams. It is a coldwater stream with sensitive macroinvertebrate taxa. The lower 1 mile near Bass Lake was channelized in the past. Proposed residential development in the area threatens this segment.</p> <p>Causes of Impairment: Thermal modifications - T Siltation - T Other habitat alterations - T</p> <p>Sources of Impairment: Land development/Suburbanization - T Channelization - T</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH91 1</b>	<b>03-130</b>	<b>9.64</b>	<b>0.00</b>	County: <b>ASHTABULA CO</b>	
WB Name: <b>ROCK CREEK (LEBANON CREEK TO GRAND RIVER)</b>				USEPA Reach Code: <b>04110004-017</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>9.64</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>1.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>8.64</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>1.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> No impacts were observed in the lower 1 mile of stream. Conditions appear to be stable.</p>					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH91 8</b>	<b>03-001</b>	<b>60.23</b>	<b>50.59</b>	County: <b>ASHTABULA CO</b>	
WB Name: <b>GRAND RIVER (HOSKINS CREEK TO ROCK CREEK)</b>				USEPA Reach Code: <b>04110004-002</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>9.64</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>9.64</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>9.6</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<p><b>Comments:</b> This segment is fully meeting its use designation of Warmwater Habitat.</p>					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH91 14</b>	<b>03-001</b>	<b>75.89</b>	<b>60.23</b>	County: <b>ASHTABULA CO</b>	
WB Name: <b>GRAND RIVER (COFFEE CREEK TO HOSKINS CREEK)</b>				USEPA Reach Code: <b>04110004-002</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>15.66</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>15.66</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>15.6</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: Causes of Impairment: Flow alteration - H			Sources of Impairment: Natural - S		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH91 15</b>	<b>03-150</b>	<b>13.00</b>	<b>0.00</b>	County: <b>ASHTABULA CO</b>	
WB Name: <b>PHELPS CREEK</b>				USEPA Reach Code: <b>04110004-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>13.00</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>13.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>13.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: The presence of Redside dace and Mottled sculpins (cool-water fish species) and coldwater aquatic insect taxa indicate that this segment is possibly a Coldwater Habitat stream. Future monitoring is recommended to follow up on this potential use designation.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH91 20</b>	<b>03-160</b>	<b>14.10</b>	<b>0.00</b>	County: <b>TRUMBULL CO</b>	
WB Name: <b>SWINE CREEK</b>				USEPA Reach Code: <b>04110004-018</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>14.10</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>7.90</b>	Full, But Threatened: <b>6.20</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>14.1</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: This segment was fully meeting its use designation of Warmwater Habitat. Some evidence of past channelization was present. Farming to the edges of the stream, and riparian removal are concerns.					
Causes of Impairment: Siltation - T Other habitat alterations - T			Sources of Impairment: Removal of riparian vegetation - T		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH91 25</b>	<b>03-001</b>	<b>84.90</b>	<b>75.89</b>	County: <b>TRUMBULL CO</b>	
WB Name: <b>GRAND RIVER (MUD CREEK TO COFFEE CREEK)</b>				USEPA Reach Code: <b>04110004-002</b>	
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>9.01</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9507 to 9510</b>	Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>9.01</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>9.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment is fully meeting its use designation of Warmwater Habitat.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH91 26</b>	<b>03-022</b>	<b>9.80</b>	<b>0.00</b>	County: <b>TRUMBULL CO</b>	
WB Name: <b>BAUGHMAN CREEK</b>				USEPA Reach Code: <b>04110004-007</b>	
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>9.80</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9507 to 9510</b>	Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>9.80</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>9.8</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> A regional reference site on this stream still supports a population of northern brook lamprey. Cattle have unrestricted access to the stream.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - T			Pasture land - T		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH91 28</b>	<b>03-001</b>	<b>102.70</b>	<b>84.90</b>	County:	
WB Name: <b>GRAND RIVER (HEADWATERS TO MUD CREEK)</b>				USEPA Reach Code: <b>04110004-003</b>	
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>17.80</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9507 to 9510</b>	Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.00</b>	Full, But Threatened:	<b>10.10</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>7.70</b>
Narrative Assessment:	Excellent: <b>5.0</b>	Good: <b>5.1</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment is fully meeting its use designation of Warmwater Habitat, but is being recommended for upgrading to Exceptional Warmwater Habitat. The Village of Parkman has little effect on the river.					
Causes of Impairment:			Sources of Impairment:		
Nutrients - T			Minor Municipal Point Source - T		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH92 1</b>	<b>03-001</b>	<b>14.31</b>	<b>0.00</b>	County: <b>LAKE CO</b>	
WB Name: <b>GRAND RIVER (PAINE CREEK TO MOUTH)</b>				USEPA Reach Code: <b>04110004-001</b>	
Aquatic Life Use(s): <b>EWH, WWH</b>		Segment Length: <b>14.31</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>1.50</b>	Full, But Threatened: <b>5.00</b>	Partial: <b>1.60</b>	None: <b>0.60</b>	Not Assessed: <b>5.61</b>	
Narrative Assessment:	Excellent: <b>6.5</b>	Good: <b>0.0</b>	Fair: <b>1.6</b>	Poor: <b>0.6</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The Diamond Shamrock waste lagoons continue to impact the biological communities in the lower Grand River. Upstream from Painesville the stream is exceptional in biological quality, recreational opportunities, and aesthetics.					
Causes of Impairment:			Sources of Impairment:		
Salinity/TDS/chlorides - H			Waste storage/storage tank leaks - H		
Nutrients - T			Minor Municipal Point Source - T		
Siltation - T			Land development/Suburbanization - T		
Flow alteration - T			Waste storage/storage tank leaks - M		
Salinity/TDS/chlorides - M			Atmospheric deposition - M		
Priority organics - M			Source Unknown - M		
Mercury - M					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH92 7</b>	<b>03-100</b>	<b>17.20</b>	<b>0.00</b>	County: <b>LAKE CO</b>	
WB Name: <b>BIG CREEK</b>				USEPA Reach Code: <b>04110004-008</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>17.20</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>9.60</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>7.50</b>	None: <b>0.10</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>14.9</b>	Fair: <b>2.2</b>	Poor: <b>0.1</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Upgrades to the Chardon WWTP have resulted in improvements in the biological communities downstream from the plant. Impacts are still present though. On-site sewage disposal and urban runoff contribute to non-attainment upstream from the Chardon WWTP. Excessive flows through the Chardon WWTP, and chlorine cause impairment downstream from the plant.					
Causes of Impairment:			Sources of Impairment:		
Organic enrichment/DO - H			Minor Municipal Point Source - M		
Nutrients - M			Onsite wastewater systems (septic tanks) - M		
			Minor Municipal Point Source - H		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH92 11</b>	<b>03-104</b>	<b>3.40</b>	<b>0.00</b>	County: <b>GEAUGA CO</b>	
WB Name: <b>JENKS CREEK</b>				USEPA Reach Code: <b>04110004-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>3.40</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.50</b>	Full, But Threatened: <b>2.30</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.60</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>2.8</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: The presence of coldwater fish species and macroinvertebrate taxa indicate that this stream may be Coldwater Habitat. Future monitoring is recommended to follow up on this status.			Sources of Impairment:		
Causes of Impairment: Organic enrichment/DO - T			Package Plants (Small Flows) - T		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH92 12</b>	<b>03-105</b>	<b>2.80</b>	<b>0.00</b>	County: <b>GEAUGA CO</b>	
WB Name: <b>CUTTS CREEK</b>				USEPA Reach Code: <b>04110004-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>2.80</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9610 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>1.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>1.80</b>	
Narrative Assessment:	Excellent: <b>1.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: This segment is threatened by proposed construction of a power line. Follow-up sampling is recommended to confirm the Coldwater Habitat/Exceptional Warmwater Habitat use designation.			Sources of Impairment:		
Causes of Impairment: Siltation - T Other habitat alterations - T			Construction - T		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH92 13</b>	<b>03-110</b>	<b>17.50</b>	<b>0.00</b>	County: <b>LAKE CO</b>	
WB Name: <b>PAINE CREEK</b>				USEPA Reach Code: <b>04110004-014</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>17.50</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>17.50</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>17.5</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
Comments: This segment is currently designated Warmwater Habitat, but is recommended for upgrading to Exceptional Warmwater Habitat. Development in LeRoy Township threatens the high quality of this stream.			Sources of Impairment:		
Causes of Impairment: Siltation - T Other habitat alterations - T			Land development/Suburbanization - T		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH92 14</b>	<b>03-111</b>	<b>10.00</b>	<b>0.00</b>	County: <b>LAKE CO</b>	
WB Name: <b>BATES CREEK</b>				USEPA Reach Code: <b>04110004-</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>10.00</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9610 to 9610</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>1.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>9.00</b>	
Narrative Assessment:	Excellent: <b>1.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment is threatened by the proposed construction of a power line. Macroinvertebrate results suggest it is a high quality stream. Wetlands are present in the area. Future sampling is recommended to verify Exceptional Warmwater Habitat conditions.					
Causes of Impairment:			Sources of Impairment:		
Siltation - T			Construction - T		
Other habitat alterations - T					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH92 16</b>	<b>03-001</b>	<b>23.58</b>	<b>14.31</b>	County: <b>LAKE CO</b>	
WB Name: <b>GRAND RIVER (MILL CREEK TO PAINE CREEK)</b>				USEPA Reach Code: <b>04110004-001</b>	
Aquatic Life Use(s): <b>EWH</b>		Segment Length: <b>9.27</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>9.30</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>9.3</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment of stream is fully supporting its Exceptional Warmwater Habitat use designation.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH92 20</b>	<b>03-001</b>	<b>41.28</b>	<b>23.58</b>	County: <b>ASHTABULA CO</b>	
WB Name: <b>GRAND RIVER (MILL CREEK TO MILL CREEK)</b>				USEPA Reach Code: <b>04110004-001</b>	
Aquatic Life Use(s): <b>WWH, EWH</b>		Segment Length: <b>17.70</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>12.70</b>	Full, But Threatened: <b>5.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>7.7</b>	Good: <b>10.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Although this segment is only partially meeting its Exceptional Warmwater Habitat use designation, it does support populations of river herring and muskellunge (2 fish species which are listed as "special interest" with the Ohio Department of Natural Resources).					
Causes of Impairment:			Sources of Impairment:		
Mercury - M			Atmospheric deposition - M		
Siltation - T			Land development/Suburbanization - T		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH92 23</b>	<b>03-120</b>	<b>19.55</b>	<b>0.00</b>	County: <b>ASHTABULA CO</b>	
WB Name: <b>MILL CREEK (ASKUE RUN TO GRAND RIVER)</b>				USEPA Reach Code: <b>04110004-005</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>19.55</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>9.60</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>9.95</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>9.6</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Two biological reference sites were sampled in this segment. No impacts were noted. Future sampling should be done downstream from the confluence of Cemetery Creek to assess any effect from the Jefferson WWTP.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH92 24</b>	<b>03-124</b>	<b>6.32</b>	<b>0.00</b>	County: <b>ASHTABULA CO</b>	
WB Name: <b>CEMETERY CREEK</b>				USEPA Reach Code: <b>04110004-</b>	
Aquatic Life Use(s): <b>WWH, LWH</b>		Segment Length: <b>6.32</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>1.30</b>	Not Assessed: <b>5.02</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>1.3</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Unsewered discharges upstream from the town of Jefferson impact the stream. The Jefferson WWTP is operating beyond capacity and is discharging poorly treated sewage, further impacting the stream. Recent upgrades to the WWTP should improve instream conditions.					
Causes of Impairment: Organic enrichment/DO - H			Sources of Impairment: Onsite wastewater systems (septic tanks) - H Minor Municipal Point Source - M		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH92 29</b>	<b>03-001</b>	<b>50.59</b>	<b>41.28</b>	County: <b>ASHTABULA CO</b>	
WB Name: <b>GRAND RIVER (ROCK CREEK TO MILL CREEK)</b>				USEPA Reach Code: <b>04110004-002</b>	
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>9.31</b>			
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9507 to 9510</b>	Aquatic Life Use Attainment:		Assessment Age: <b>Current</b>	
Full: <b>9.31</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>0.00</b>	Not Assessed: <b>0.00</b>	
Narrative Assessment:	Excellent: <b>5.0</b>	Good: <b>4.3</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This segment has good to exceptional water and biological quality.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>EOLP</b>
<b>OH93 3</b>	<b>07-100</b>	<b>23.83</b>	<b>0.00</b>	County:	<b>ASHTABULA CO</b>
WB Name: <b>CONNEAUT CREEK (OH./PA. BORDER TO LAKE ERIE)</b>				USEPA	
Aquatic Life Use(s): <b>CWH</b>				Reach Code:	<b>04120101-012</b>
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9510</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>23.53</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.30</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>23.5</b>	Good: <b>0.0</b>	Fair: <b>0.3</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Upstream from the Conneaut Harbor area, the fish community is in the exceptional range. A strong population of bigeye chubs (fish species sensitive to pollution) was present.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - H			Dredging - H		
Streambank modification/destabilization - H					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>EOLP</b>
<b>OH93 4.1</b>	<b>07-012</b>	<b>3.05</b>	<b>0.00</b>	County:	<b>ASHTABULA CO</b>
WB Name: <b>WHITMAN CREEK</b>				USEPA	
Aquatic Life Use(s): <b>NONE</b>				Reach Code:	<b>04120101-</b>
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9506 to 9506</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>1.00</b>	Full, But Threatened:	<b>0.30</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>1.75</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>1.0</b>	Fair: <b>0.3</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> The lower 1 mile of stream has natural habitat conditions, and meets Warmwater Habitat criteria. The Ohio Department of Natural Resources has reported salmonid fish in this segment, and the Ohio EPA confirmed it with the capture of Rainbow trout. At least 0.3 miles of Whitman Creek is threatened by the construction of a fly ash disposal landfill. Reserve Environmental, a hazardous waste landfill, is located on a tributary to Whitman Creek.					
Causes of Impairment:			Sources of Impairment:		
Other habitat alterations - T			Land Disposal - T		
Filling and draining - T			Hydromodification - T		

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion:	<b>EOLP</b>
<b>OH93 4.2</b>	<b>07-020</b>	<b>3.85</b>	<b>0.00</b>	County:	
WB Name: <b>TRIB. TO LAKE ERIE (BERKSHIRE RD.)</b>				USEPA	
Aquatic Life Use(s): <b>NONE</b>				Reach Code:	
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9506 to 9506</b>		Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>3.80</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>0.05</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>3.8</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> This stream was a sampled as a reference stream to the North Kingsville Landfill tributary. Macroinvertebrate data indicated marginally good quality for a small, high gradient stream.					

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:		
<b>OH93 4.3</b>	<b>07-019</b>	<b>1.01</b>	<b>0.00</b>		Ecoregion: <b>EOLP</b>
WB Name: <i>TRIB. TO LAKE ERIE (N. KINGSVILLE)</i>					County:
Aquatic Life Use(s): <b>NONE</b>					USEPA Reach Code:
Segment Length: <b>1.01</b>					
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9506</b>	Aquatic Life Use Attainment:			Assessment Age: <b>Current</b>
Full: <b>0.00</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>0.00</b>	None: <b>1.00</b>	Not Assessed: <b>0.01</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>1.0</b>
<b>Comments:</b> There were severe impacts within this segment associated with the North Kingsville Landfill. High levels of arsenic and other metals were recorded in the sediments. Macroinvertebrate sampling yielded only tolerant organisms, with low numbers and low diversity.					
<b>Causes of Impairment:</b>			<b>Sources of Impairment:</b>		
Metals - H			Landfills - H		
Priority organics - H					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:		
<b>OH93 5</b>	<b>07-001</b>	<b>27.54</b>	<b>0.00</b>		Ecoregion: <b>EOLP</b>
WB Name: <i>ASHTABULA RIVER</i>					County: <b>ASHTABULA CO</b>
Aquatic Life Use(s): <b>WWH</b>					USEPA Reach Code: <b>04110004-008</b>
Segment Length: <b>27.54</b>					
Assessment Cycle: <b>98</b>	Data Collection Period: <b>9506 to 9510</b>	Aquatic Life Use Attainment:			Assessment Age: <b>Current</b>
Full: <b>22.20</b>	Full, But Threatened: <b>0.00</b>	Partial: <b>4.00</b>	None: <b>1.30</b>	Not Assessed: <b>0.04</b>	
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>22.2</b>	Fair: <b>4.0</b>	Poor: <b>1.3</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Ashtabula Harbor is highly modified physically to accomodate shipping. Fields Brook contributes contaminated sediments to the harbor area. Upstream from Fields Brook the stream is high quality, containing a strong population of bigeye chubs (fish species sensitive to pollution).					
<b>Causes of Impairment:</b>			<b>Sources of Impairment:</b>		
Priority organics - H			Hazardous waste - H		
Other habitat alterations - M			MARINA(s) - M		
Cause Unknown - M			Natural - S		
			Streambank modification/destabilization - M		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH93 10</b>	<b>07-004</b>	<b>16.50</b>	<b>0.00</b>	County: <b>ASHTABULA CO</b>	
WB Name: <b>WEST BRANCH ASHTABULA RIVER</b>				USEPA Reach Code: <b>04110004-</b>	
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>16.50</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9507 to 9510</b>	Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>5.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>11.50</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> There are no apparent problems within this segment.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH93 11</b>	<b>07-005</b>	<b>10.70</b>	<b>0.00</b>	County: <b>ASHTABULA CO</b>	
WB Name: <b>EAST BRANCH ASHTABULA RIVER</b>				USEPA Reach Code: <b>04110004-</b>	
Aquatic Life Use(s):	<b>CWH</b>	Segment Length:	<b>10.70</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9507 to 9510</b>	Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>5.00</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>0.00</b>
				None:	<b>0.00</b>
					Not Assessed: <b>5.70</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>5.0</b>	Fair: <b>0.0</b>	Poor: <b>0.0</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> There are no apparent problems within this segment.					

WBID #:	River Code:	Upper River Mile:	Lower River Mile:	Ecoregion: <b>EOLP</b>	
<b>OH93 16</b>	<b>07-007</b>	<b>10.50</b>	<b>0.00</b>	County: <b>ASHTABULA CO</b>	
WB Name: <b>COWLES CREEK</b>				USEPA Reach Code: <b>04110003-</b>	
Aquatic Life Use(s):	<b>WWH</b>	Segment Length:	<b>10.50</b>		
Assessment Cycle:	<b>98</b>	Data Collection Period:	<b>9507 to 9510</b>	Assessment Age: <b>Current</b>	
Aquatic Life Use Attainment:					
Full:	<b>0.70</b>	Full, But Threatened:	<b>0.00</b>	Partial:	<b>6.40</b>
				None:	<b>3.40</b>
					Not Assessed: <b>0.00</b>
Narrative Assessment:	Excellent: <b>0.0</b>	Good: <b>0.7</b>	Fair: <b>6.4</b>	Poor: <b>3.4</b>	Very Poor: <b>0.0</b>
<b>Comments:</b> Improvements were noted downstream from the Geneva WWTP compared to sampling done in 1981. Unsewered wastes upstream from the WWTP within the Geneva city limits were causing impairment in the biological community and the water quality. The regional reference site at river mile 7.2 declined in biological quality for unknown reasons. Causes of Impairment: Sources of Impairment:					
Nutrients - M			Minor Municipal Point Source - H		
Organic enrichment/DO - H			Minor Municipal Point Source - S		
Cause Unknown - M			Source Unknown - M		
			Onsite wastewater systems (septic tanks) - M		
			Urban Runoff/Storm Sewers (NPS) - M		

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WBID #:	River Code:	Upper River Mile:	Lower River Mile:											
<b>OH93 18</b>	<b>07-011</b>	<b>9.30</b>	<b>0.00</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Ecoregion:</td> <td><b>EOLP</b></td> </tr> <tr> <td>County:</td> <td><b>ASHTABULA CO</b></td> </tr> <tr> <td>USEPA Reach Code:</td> <td><b>04110003-</b></td> </tr> </table>	Ecoregion:	<b>EOLP</b>	County:	<b>ASHTABULA CO</b>	USEPA Reach Code:	<b>04110003-</b>				
Ecoregion:	<b>EOLP</b>													
County:	<b>ASHTABULA CO</b>													
USEPA Reach Code:	<b>04110003-</b>													
WB Name: <b>ARCOLA CREEK</b>														
Aquatic Life Use(s): <b>WWH</b>		Segment Length: <b>9.30</b>												
Assessment Cycle: <b>98</b>		Data Collection Period: <b>9507 to 9510</b>		Assessment Age: <b>Current</b>										
Aquatic Life Use Attainment:														
Full:	Full, But Threatened:	Partial:	None:	Not Assessed:										
<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.50</b>	<b>1.80</b>										
Narrative Assessment:	Excellent:	Good:	Fair:	Poor:	Very Poor:									
	<b>0.0</b>	<b>0.0</b>	<b>3.5</b>	<b>4.0</b>	<b>0.0</b>									
<p><b>Comments:</b> Nutrient enrichment from the Madison WWTP, combined with channelization, resulted in impairment of the biological community. More importantly, water withdrawal in the lower 4 to 5 miles took away all of the stream flow.</p> <table style="width: 100%;"> <tr> <td style="width: 50%;">Causes of Impairment:</td> <td style="width: 50%;">Sources of Impairment:</td> </tr> <tr> <td>Organic enrichment/DO - M</td> <td>Onsite wastewater systems (septic tanks) - M</td> </tr> <tr> <td>Nutrients - M</td> <td>Minor Municipal Point Source - M</td> </tr> <tr> <td>Flow alteration - H</td> <td>Flow regulation/modification - H</td> </tr> <tr> <td>Other habitat alterations - H</td> <td>Channelization - H</td> </tr> </table>					Causes of Impairment:	Sources of Impairment:	Organic enrichment/DO - M	Onsite wastewater systems (septic tanks) - M	Nutrients - M	Minor Municipal Point Source - M	Flow alteration - H	Flow regulation/modification - H	Other habitat alterations - H	Channelization - H
Causes of Impairment:	Sources of Impairment:													
Organic enrichment/DO - M	Onsite wastewater systems (septic tanks) - M													
Nutrients - M	Minor Municipal Point Source - M													
Flow alteration - H	Flow regulation/modification - H													
Other habitat alterations - H	Channelization - H													