

APPENDIX A

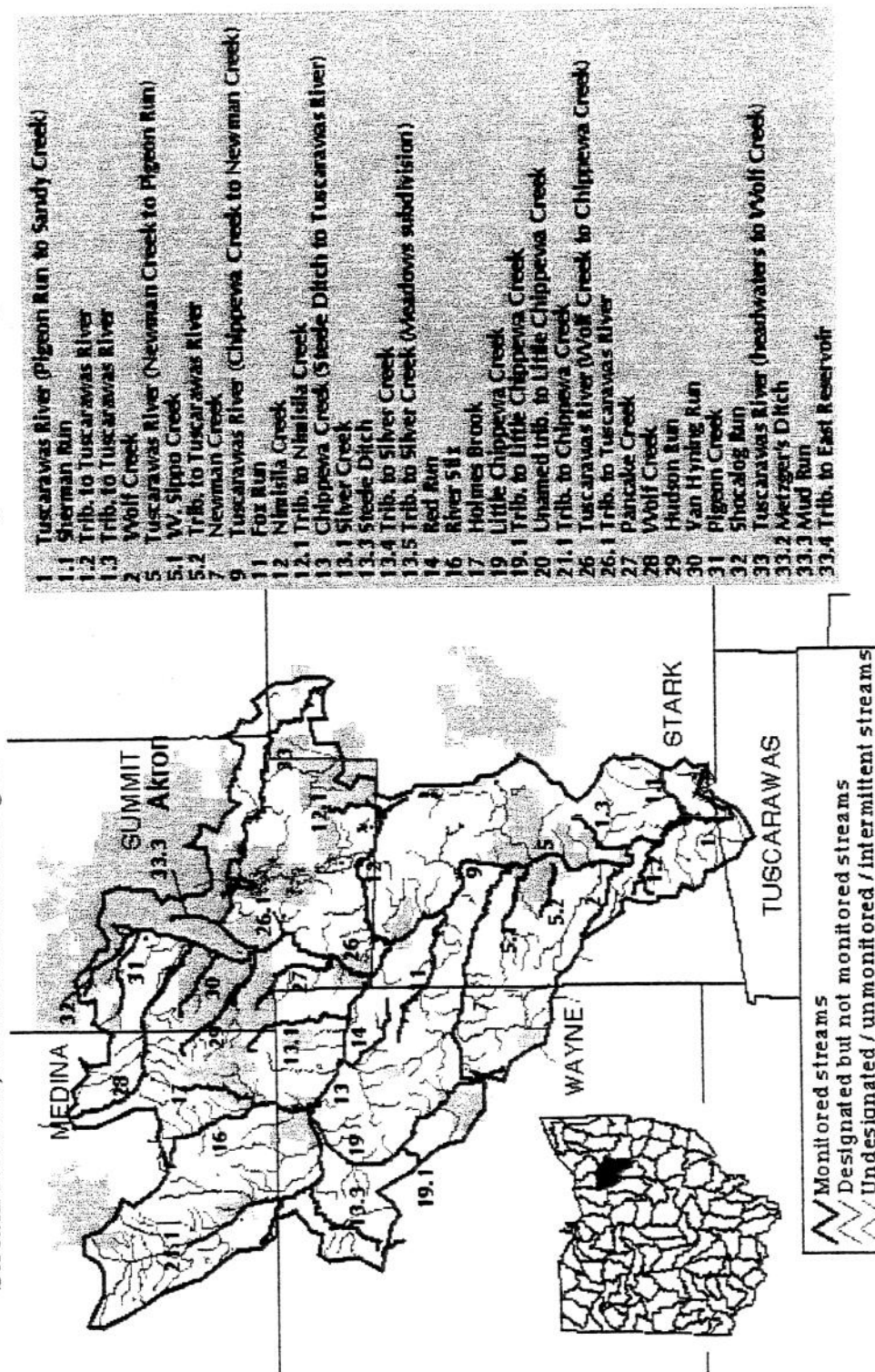
Ohio EPA Use Attainment Status and Causes and Sources of Impairment for Monitored Stream Segments in the Upper Tuscarawas River Drainage Area

Map of Hydrologic Group

Group 10

Upper Tuscarawas River

Stream Network, Monitored Stream Segments and the Drainage Area for Group 10



| What is use attainment? | What are water quality standards? | View Use Attainment Statistics | View Causes and Sources of Impairment |
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Last modified: October 31, 1997

Water Quality

Water Resource Inventory

Definitions

Terms and Abbreviations	
Stream Segment:	A section or entire length of a waterway as defined in the Planning and Engineering Data Management System for Ohio (PEMSO) or in the Gazetteer of Ohio Streams, published by the Division of Water, Ohio Department of Natural Resources. Each stream segment or waterbody is assigned a Hydrologic group number and a segment number. Under the PEMS0 system, the state is divided into 93 hydrologic groups.
Segment Name:	The name of the river, stream or lake as defined in the PEMS0 system or the Gazetteer of Ohio Streams. Stream segments that are less than the length of the waterway will often have the endpoints identified in parenthesis. For example, segment 35 - 1 is identified as Mill Creek (Otter Run to Scioto River).
Sampling Year:	The year the monitoring data was collected.
Attainment of Aquatic Life Use:	A stream is attaining its designated aquatic life use if based on the results of water quality monitoring, the fish and insects found in the stream are similar to fish and insects found in other relatively unpolluted streams of the same designated use and within the same ecoregion.

Degree of Use Attainment	
Status description	Qualifications
Fully attaining	All indices meet criteria.
Fully attaining but threatened	All indices meet criteria, but land use activities in the watershed pose an immediate threat to maintaining water quality at this level.
Partially attaining	One of two OR two of three indices do not meet criteria and are not in the poor or very poor category.
Non-attaining	None of the indices meet criteria OR one organism group indicates a severe toxic impact (poor or very poor category) even if the other organism group indicates attainment.

Causes and Sources of Impairment	
Causes of Impairment:	The pollutant or stressor that affects water quality and aquatic life.
Sources of Impairment:	Sources of impairment are the entities or activities from where the pollutant or effect originated (e.g., municipal wastewater treatment plant, row crop agriculture, bank de-stabilization, etc.).
Magnitude Codes	
Major, moderate and minor impacts refer to the high, moderate and slight magnitude codes specified by the US EPA guidance for the 305b Report. A magnitude code is assigned based upon evidence from biological, chemical and/or physical indicators and best professional judgement.	
[H]	A primary or major cause or source of impairment.
[M]	A secondary or moderate cause or source of impairment.

[S]	A slight or minor cause or source of impairment.
[T]	A cause or source that threatens to impair a stream that is currently meeting its water quality standards. These are often associated with streams that, because of obvious trends or qualitative data, are thought to be declining in quality and may become degraded in the future without changes in current practices.

Causal Associations

The assignment of principal causes and sources of impairment do not represent a true "cause and effect" analysis, but rather represent the association of impairments (based on response indicators) with stressor and exposure indicators whose links with the biosurvey data are based on previous research or experience with analogous situations and impacts. The reliability of the identification of probable causes and sources is increased where many such prior associations have been identified. The process is similar to making a medical diagnosis in which a doctor relies on multiple line of evidence concerning patient health. Such diagnoses are based on previous research which experimentally or statistically linked symptoms and test results to specific diseases or pathologies.

Stream Segment Data Pertaining to the Upper Tuscarawas River Watershed						
Segment OH10 12		NIMISILA CREEK				
Segment Length		Drainage Area				
11.1 (miles)		31.8 (sq. Miles)				
Attainment of Aquatic Life Use (monitored miles)						Sampling Year:
Fully	Threatened	Partial	Not Attaining	Not Assessed	Designation	
1.9	0	0	7.4	1.8	WWH	1992
Causes of Impairment			Sources of Impairment			
Flow alteration [H], Other habitat alterations [H], Flow alteration [H], Cause Unknown [H], Other habitat alterations [H]			Upstream impoundment [H], Upstream impoundment [H], Source Unknown [H], Onsite wastewater systems (septic tanks) [H]			
Segment OH10 12.1		TRIB. TO NIMISILA CREEK (RM 8.85)				
Segment Length		Drainage Area				
3.8 (miles)		2.9 (sq. Miles)				
Attainment of Aquatic Life Use (monitored miles)						Sampling Year:
Fully	Threatened	Partial	Not Attaining	Not Assessed	Designation	
3.8	0	0	0	0	NONE	1992
Causes of Impairment			Sources of Impairment			
None Identified			None Identified			
Segment OH10 33		TUSCARAWAS RIVER (HEADWATERS TO WOLF CREEK)				
Segment Length		Drainage Area				
19.21 (miles)		74.4 (sq. Miles)				
Attainment of Aquatic Life Use (monitored miles)						Sampling Year:
Fully	Threatened	Partial	Not Attaining	Not Assessed	Designation	
0	0	4	2	13.2	WWH	1993
Causes of Impairment			Sources of Impairment			
Metals [M], Other habitat alterations [H], Unknown toxicity [H], Nutrients [S]			Urban Runoff/Storm Sewers (NPS) [H], Channelization [H], Removal of riparian vegetation [S], Minor Municipal Point Source [S], Contaminated sediments [S]			

Segment OH10 33.1			OHIO CANAL			
Segment Length			Drainage Area			
4.44 (miles)			200 (sq. Miles)			
Attainment of Aquatic Life Use (monitored miles)						Sampling Year:
Fully	Threatened	Partial	Not Attaining	Not Assessed	Designation	
0	0	0	0	0	NONE	NONE
Causes of Impairment			Sources of Impairment			
Not Assessed			Not Assessed			
Segment OH10 33.12			NESMITH LAKE			
Segment Length			Drainage Area			
0.37 (miles)			200 (sq. Miles)			
Attainment of Aquatic Life Use (monitored miles)						Sampling Year:
Fully	Threatened	Partial	Not Attaining	Not Assessed	Designation	
0	0	0	0	0	NONE	NONE
Causes of Impairment			Sources of Impairment			
Not Assessed			Not Assessed			
Segment OH10 33.2			METZGERS DITCH			
Segment Length			Drainage Area			
8.13 (miles)			9.5 (sq. Miles)			
Attainment of Aquatic Life Use (monitored miles)						Sampling Year:
Fully	Threatened	Partial	Not Attaining	Not Assessed	Designation	
0	1.7	0	1.3	5.1	WWH	1990
Causes of Impairment			Sources of Impairment			
Organic enrichment/DO [H], Priority organics [T], Total toxics [M], Total toxics [T]			Municipal Point Sources [H], Land development/Suburbanization [S], Landfills [H], Landfills [T]			
Segment OH10 33.4			TRIB. TO EAST RESERVOIR			
Segment Length			Drainage Area			
2.96 (miles)			1.3 (sq. Miles)			

Attainment of Aquatic Life Use (monitored miles)						Sampling Year:
Fully	Threatened	Partial	Not Attaining	Not Assessed	Designation	
0.5	0	0	0	2.5	NONE	1978
Causes of Impairment			Sources of Impairment			
None Identified			None Identified			
Source: Ohio EPA Website at: http://chagrin.epa.stat.oh.us/watershed/grp/group10.htm						

Ohio Nonpoint Source Assessment Pertaining to Stream Segments in the Upper Tuscarawas River Watershed	
Group/Segment 10 12	Nimisila Creek
Stream Assessment Status	NPS impaired
Sources of known or suspected impact	agriculture, urban runoff
Aquatic Life Designated Use	warmwater
Known sources of impairment	Upstream impoundment, Upstream impoundment, Source Unknown, Onsite wastewater systems (septic tanks)
Segment Length (miles)	11
Known causes of impairment	habitat alterations, flow alteration
Group/Segment 10 12.1	Trib. to Nimisila Creek (rm 8.85)
Stream Assessment Status	attaining use
Sources of known or suspected impact	
Aquatic Life Designated Use	none
Known sources of impairment	
Segment Length (miles)	4
Known causes of impairment	
Group/Segment 10 33.1	Ohio Canal
Stream Assessment Status	no information
Aquatic Life Designated Use	none
Segment Length (miles)	4
Group/Segment 10 33.12	Nesmith Lake
Stream Assessment Status	no information
Sources of known or suspected impact	
Aquatic Life Designated Use	none
Known sources of impairment	
Segment Length (miles)	0
Known causes of impairment	

Group/Segment 10 33.2	Myersville Tributary
Stream Assessment Status	PS & NPS impaired
Sources of known or suspected impact	construction sites, channelization, sanitary landfills
Aquatic Life Designated Use	warmwater
Known sources of impairment	Municipal Point Sources, Land development/Suburbanization, Landfills, Landfills
Segment Length (miles)	3
Known causes of impairment	organic enrichment/D.O., total toxics
Group/Segment 10 33.4	Tributary to Tuscarawas River (Uniontown)
Stream Assessment Status	attaining use
Sources of known or suspected impact	
Aquatic Life Designated Use	none
Known sources of impairment	
Segment Length (miles)	2
Known causes of impairment	
Source: Ohio EPA website at http://chagrin.epa.state.oh.us/watershed/grp/group10.htm	