Forward

Section 305(b) of the Water Quality Act requires the states produce "Water Quality Inventories" that assess progress with the objectives of the Act. Ohio has changed the title of its report from "Water *Quality* Inventory" to "Water *Resource* Inventory". This is more than just a semantic change and is in keeping with the theme of the 1990 report: an ecosystem emphasis rather than on water chemistry alone. Ohio recognizes that effects on aquatic ecosystems are broad, and extend beyond water chemistry to physical and biological impacts to water resources. The early thrust of water management programs was largely based on water quality. While this remains important it is now time to consider additional impacts. Improved biological and habitat assessment tools have recently emerged and allow a more direct assessment of the biological integrity goals of the Water Quality Act (Section 101[a][2]). We hope the information in this document will illustrate the progress Ohio has made towards improving water resource quality and the challenges that remain to protect and restore *all* aspects of Ohio's water resources.

305b REPORT CONTENTS

Title	Page
Table of Contents	i
List of Tables	iii
List of Figures	iv
Acknowledgements	vi
Executive Summary	vii
Section 1. Introduction	1
USEPA Waterbody System (WBS)	2
Measures of Extent and Severity of Impairment	4
Section 2. Methodology for Assessing Use Attainment	6
Biocriteria, Chemical Criteria, and Levels of Concern	7
Lists of Impaired Waters-Methodology	13
Agreement between Biocriteria and Chemical Criteria	13
Section 3. Designated Use Support	18
Section 4. Causes and Sources of Non-Support of Designated Uses	24
Dissolved Oxygen/Organic Enrichment	26
Siltation	27
Habitat	29
pH	30
Metals	32
Ammonia	32
Flow Alteration	32
Priority Organics/Unknown Toxicity	34
Threatened Stream Segments	33
Biological Response "Signatures"	34
Inland Lakes	42
Lake Erie Nearshore and Harbors/Estuary Biocriteria	43
Section 5. Public Health/Aquatic Life Concerns	47
Toxics Concerns	47
Fish Kills/Spills/Drinking Water Closures	51
Public Water Supply Information	55
Section 6. Lakes Information	57
Section 7. Nonpoint Source Information	59
Ohio EPA Nonpoint Source Assessment	59
Heidelberg Water Quality Laboratory Studies	59
Section 8. Ground-water Quality	60

Section 9. District Highlights 61
Section 10. Selected Program Descriptions 66
Wetlands/401 Certification 66
Lake Erie Programs 68
Inland Lakes 70
Nonpoint Program 70
Ohio River (ORSANCO) 71
Economic Analyses 71
Ohio EPA Toxics Strategy 73
Section 11. Special State Concerns 74
Interagency Work Group on Fish Contaminant Advisories 74
Exotic Species in Ohio 74
Biocriteria in Ohio's WQS 75
References 76
Appendix A. List of all impaired waterbodies in Ohio (304l Long List). 79
Appendix B. List of all waterbodies impaired by toxics in Ohio (304l Medium List). 103
Appendix C. List of streams and rivers meeting aquatic life uses in Ohio 113
Appendix D. Locations in Ohio streams and rivers with contaminated sediments 121
Appendix E. Fish kills in Ohio as reported by ODNR from 1987-1988 125
Appendix F. Locations in Ohio streams and rivers with major and extreme fecal coliform counts 128
Appendix G. List of Acronyms 130
Appendix H. Glossary 131
Appendix I. Comparison of chemistry-based and biosurvey based environmental assessments
Appendix J. Comparison of bioassay results with instream biological performance
Volume II. Water-body Segment Analysis Summaries
Volume III. Ohio's Publicly Owned Lakes/Reservoirs/Ponds (Davic 1990)
Volume IV. Ohio's Ground Water Quality
Volume V. Trends in the Biological Status of Ohio's Rivers and Streams

List of Tables

Table No.	Title	Page
2-1	Summary of classified uses for Ohio surface waters	6
2-2	Biological (biosurvey) aquatic life use attainment criteria	7
2-3	Chemical-specific aquatic life use attainment criteria	7
2-4	"Levels of Concern" for chemical parameters without aquatic life criteria	8
2-5	Concentrations of ambient chemical parameters used to indicate increasing severity of mine impacts	8
2-6	Classification of data types used in use attainment assessments	9
2-7	Categories of nonpoint pollution reported in this report and the more specific categories reported in the 1989 Nonpoint Source Assessment.	11
2-8	Possible explanations for agreement and disagreement between biosurvey and chemical surrogate methods of assessing aquatic life use attainment	15
3-1	Aquatic life use attainment in Ohio streams	19
3-2	Aquatic life use attainment and CWA goal support in Ohio lakes	20
3-3	Aquatic life use attainment and CWA goal support in Lake Erie	21
3-4	CWA fishable goal support in Ohio streams	22
4-1	Assessment of causes of impairment of aquatic life uses in Ohio streams	25
4-2	Assessment of sources of impairment aquatic life uses in Ohio streams	27
4-3	Distribution of 225 sampling sites of IBI versus Iwb by impact type	38
4-4	Assessment of causes of impairment of aquatic life uses in Ohio lakes, ponds, and reservoirs	42
4-5	Assessment of sources of impairment of aquatic life uses in Ohio lakes, ponds, and reservoirs	43
4-6	Assessment of causes of impairment of aquatic life uses in Lake Erie	44
4-7	Assessment of sources of impairment of aquatic life uses in Lake Erie	45
5-1	Miles or Acres of Ohio surface waters monitored for and impaired by toxic substances	47
5-2	Waterbodies in Ohio with Fish and Primary Contact Advisories issued by state and local health Departments	49
5-3	Reported drinking water intake closures related to spill incidents in Ohio from 1987–89	51
5-4	State park beaches posted for water quality advisories during 1989	52
5-5	Beach closures as reported by the Department of Health for 1988-89	52
5-6	Water systems where volatile organic compounds were detected in amounts exceeding "maximum contaminant levels"	56

List of Figures

Figure No.	Title	Page
1-1	Some basic statistics on Ohio	1
1-2	The five principle factors that influence biological integrity in streams	3
1-3	Example of method to estimate severity of impairment	5
2-1	Map annotated with 93 Ohio sub-basin watershed names	12
2-2	Comparison of attainment status derived from biocriteria versus chemical criteria (1990)	14
2-3	Level of agreement of toxicity between bioassayand biosurvey data	17
3-1	Pie charts of 1978-1988, 1978-1990, and 1989-1990 aquatic life use attainment	20
3-2	Percent attainment of aquatic life uses in streams and rivers by ecoregion in Ohio	21
4-1	Bar chart of high and moderate *causes* of partial and non-attainment of aquatic life uses	25
4-2	Bar chart of % departure from biocriteria for *causes* of partial and non-attainment of aquatic life uses	26
4-3	Causes of aquatic life impairmentin Ohio streams and rivers by ecoregion	26
4-4	Summary of the predominant causes of partial and non-attainment in each of Ohio's 93 sub-basins	28
4-5	Summary of the predominant sources of partial and non-attainment in each of Ohio's 93 sub-basins	29
4-6	Map of QHEI scores from reference sites and habitat impacted locations in Ohio	30
4-7	Map of locations in Ohio with sediments that have highly elevated or extremely elevated concentrations of metals	31
4-8	Locations of exceptional biological communities in Ohio streams sampled between 1978 and 1989	33
4-9	Three dimensional analyses of the IBI, Iwb, and "DELT" anomalies for six impact types	36
4-10	Conceptual model of the response of the fish community to impacts	39
4-11	Plots of the IBI from eight streams in Ohio to illustrate the differential response of the fish community to various types of impact	40
4-11	IBI scores and causes of impact from the harbor areas of Lake Erie	46
5-1	Pie chart of the influence of various causes of impairment in Ohio streams with the toxic components exploded for emphasis	47
5-2	Locations of poor or very poor biological communities in Ohio streams sampled between 1985 and 1989	48
5-3	Locations of fish tissue samples with PCB concentrations > 2 ppm in Ohio streams sampled between 1985 and 1989	49
5-4	Locations of elevated or extremely elevated fecal coliform counts in Ohio streams sampled between 1985 and 1989	51

5-5 Results of sampling conducted by the City of Columbus Water Quality Assurance Laboratory at Hoover, Griggs, and O'Shaughnessy reservoirs since 1985 54
6-1 Trophic status of 143 Ohio lakes 58
9-1 IBI and Miwb scores for the West Br. and mainstem Nimishillen Cr. during summer 1985 . . 61
9-2 Total zinc concentrations (mg/l) in the W. Br. Nimishillen Cr. at Market St 62
9-3 IBI scores for Meigs Cr and Dyes Fk during 1988 and 1989 62
9-4 Nitrate concentrations in Powderlick Cr and upper Blues Cr from 6 Dec 88 to 10 Oct 89 . . . 64
9-5 Changes in chemical parameters in the Great Miami River at two locations between 1980 and 1989 65

ACKNOWLEDGEMENTS

The 1990 305b report was the result of a combined effort of many individuals. The following are acknowledged for their contributions:

Water-body Segment Integrated Analyses	Jeff DeShon, Jack Freda, Mike Bolton, Marc Smith, Roger Thoma, Randy Sanders Chuck McKnight
Fish Contaminant Data	Marc Smith
Bioassay Results	Charles Webster
Inland Lakes Summary	Jeff DeShon
Ohio River Summary	Jeff DeShon Randy Sanders
District Surface Water Highlights	Rod Mehlhop, CDO Chuck McKnight, EAS Diane Zimmerman, SWDO Ken Frase, NEDO Jim Grow, SEDO
Beach Closings	Donald Stewart, ODH Stanley Spaulding, Chief Division of Parks & Rec. ODNR
Nonpoint Source Information	Larry Antosch
Public Water Supply Closures	Gary Cutler
Columbus Water Supply Reservoir Data	Dan Binder, Perry Orndorf (Columbus Division of Water, WQ Assur. Lab)
Ground Water	Russ Stein
Wetlands	Dave Altfater Bruce Motsch, ODNR
Lake Erie Information	Julie Letterhos
Economic Evaluation/Incremental Wastewater Treatment Costs	Cathy Parlet
Ohio EPA Toxics Strategy	Dan Dudley

Ohio EPA staff who authored various documents of which all or parts are either appended to or summarized in this volume are Bob Davic and Jeff DeShon (inland lakes and reservoirs, Volume III), Russ Stein (ground water, Volume IV), and Chris Yoder (trend analysis, Volume V).

Executive Summary

1990 Ohio Water Resource Inventory
Volume I: Summary, Status, and Trends

State of Ohio Environmental Protection Agency
Division of Water Quality Planning and Assessment
Ecological Assessment Section
1800 WaterMark Drive
Columbus, Ohio 43266-0149

Ohio is a water rich state with nearly 25,000 miles of streams and rivers (large enough to be named or designated in the WQS), a 451 mile border on the Ohio River, 2500 lakes and reservoirs, and over 230 miles of Lake Erie shoreline. Ohio has ten scenic river systems (ODNR Scenic Rivers Program) with 629 miles of river, the fourth largest total in the nation. Ohio also has extensive ground water resources. Both surface and ground water supplies are important to the economy and welfare of the people of Ohio. The purpose of this report is to summarize the quality or integrity of these water resources and describe the trends in the health of Ohio's water resources since the last report in 1988.

Section 305(b) of the Clean Water Act requires each State to submit a biennial report to U.S. EPA describing the quality of its navigable waters. This task requires the compilation, computerization and integration of chemical, physical, and biological data for lakes, rivers, streams, and ground water from numerous sources. This report includes an analysis of the different chemical and biological methods that were used in this assessment; the extent to which the State's waters provide for healthy aquatic communities and recreation in and on the water; an analysis of the extent to which previously impaired waters have improved; identification of waterbodies where additional actions are needed ("long" and "medium" lists of impaired waterbodies); geographic portrayals of the major surface water pollution problems across the state; predominant causes and sources of surface water use impairments; an estimate of the economic expenditures for water pollution abatement; the quality of Ohio's inland lakes, reservoirs, and Lake Erie; and, a description of the nature and extent of nonpoint sources of pollution.

The 1988 report (Ohio EPA 1988) was the first effort that used an integrated chemical, physical, and biological assessment to determine attainment/non-attainment of beneficial uses and causes and sources of impairment on a statewide basis. As water resource agencies deal with an increasing complexity of different and more subtle problems, the need for integrated analyses becomes apparent. Continued reliance on a technology, end-of-pipe approach alone will be inadequate for resolving these remaining environmental problems and preventing new ones. Monitoring as a feedback mechanism for our pollution control and resource restoration efforts must no longer be regarded as a "luxury" item if these

efforts are to succeed. This will be increasingly important for relatively new programs such as nonpoint source management, stormwater management, and Natural Resource Damage Assessment, as well as the established programs (Water Quality Standards, permits).

The 1990 report continues with that theme and includes the following new analyses: 1) full integration and use of the U.S. EPA Waterbody System (WBS), 2) use of the Area of Degradation Value (ADV) and Percent Departure from Biocriteria concepts to portray incremental changes in aquatic life health, 3) further analysis of the relationship between chemical and biological based use impairment analyses, 4) biological response "signatures", and 5) a major effort to analyze changes observed from our follow-up surveys and at National Water Quality Monitoring Network (NAWQMN) fixed station monitoring sites.

Rivers and Streams

For the 1990 report 7,444 river miles in Ohio were assessed for attainment of aquatic life uses using monitored and evaluated level chemical and biological data. Approximately 25,165 miles have been assigned aquatic life use designations in Ohio, thus, we have assessed more than 30% of these rivers and streams. A substantial fraction of these miles have been assessed two or more times in the past 12 years. Since the 1988 report we have assessed 960 miles; of this total 665 miles were follow-up efforts. In keeping with the 1988 report, the 1990 effort concentrates on the monitored level data and assessment results. A separate document, Ohio's Nonpoint Source Assessment (Ohio EPA 1990), also includes *evaluated level* survey data which consists mostly of questionaire responses from over 200 state, local, and federal agencies.

Of the total miles with monitored and evaluated level biological and/or chemical data through 1990, 35.8 percent (2,231 miles) are attaining, 20.7 percent (1,541 miles) are partially attaining, and 43.5 percent (3,236 miles) are not attaining their aquatic life use designations. This represents only a slight improvement over the same statistics through 1988 (recalculated from the 1988 report). The coverage of our surveys is programatically biased towards segments in areas with known or suspected pollution problems. The actual percentage of total stream miles attaining their aquatic life uses statewide is likely higher. Another factor that influences these results is the "age" of selected data; some of the information used dates back to 1980. If only data since 1988 is used the non-attaining fraction declines from 43.5% to 29%. This signifies a substantial improvement in the aquatic life attainment status of Ohio's surface water resources, almost all of which is attributable to improvements made by point source discharges. Waters that are currently attaining, but which are considered threatened include 400 miles of rivers and streams. Exceptional Warmwater Habitat (EWH) streams and rivers comprise the majority of this total with 26.5% of all attaining segments threatened. This compares to 9.7% for the WWH designated attaining waters. This, too, differs from the Ohio Nonpoint Source Assessment (Ohio EPA 1990) which considers all nonpoint source impacted waters to be threatened. The *relative* contribution of sources to partial and non-attainment of aquatic life uses in rivers and streams was as follows: point source discharges, 40.8%, nonpoint sources, 31.5%, habitat modification, 17.1%, and the balance (10.6%) among natural conditions, in-place pollutants, other, and unknown. These percentages represent the cumulative totals of major and moderate (i.e. predominant) sources of impairment with most waterbody

segments being affected by multiple sources. This differs from the approach used in Ohio's Nonpoint Source Assessment (Ohio EPA 1990) and accounts for the different totals in that report.

The top five major and moderate causes of partial and non-attainment are in proportion of miles impaired: organic enrichment/dissolved oxygen (33%); siltation (13.8%), habitat degradation (12.3%), metals (11.1%); and ammonia (10.1%). These percentages represent the cumulative totals of major and moderate causes of impairment with most water body segments being affected by multiple causes. The top three causes are also the leading categories identified for threatened segments.

The use of quantitative biological indices to assess aquatic life use attainment/non-attainment (e.g. ADV, percent departure from biocriteria) provides a measure of *incremental* impairment of aquatic life uses. This represents a more refined measure of use attainment/non-attainment than that yielded by the more qualitative criteria used in past 305(b) reports. For streams and rivers partially or not attaining their aquatic life uses the majority showed slight and minor impairment with a minority showing moderate to severe impairment. Based on historical descriptions major and severe impairment of aquatic life undoubtedly existed in many more streams and rivers prior to the enactment of State and Federal water pollution control laws in the 1960's and 70's.

Ohio EPA has recently developed the concept of biological "response signatures" which are comprised of unique combinations of the biological data that consistently indicate one general type of impact over another. Examples of this concept and its use in assigning causes and sources of biological impairment are included in this report.

Trend analyses of macroinvertebrate results from 16 NAWQMN sites, some with data spanning 15 years, indicates a marked improvement at 5 locations, lesser but detectable improvement at 9 locations, no change at 1 location, and a decline at 1 location. Sufficient data were available to compare multiple years of results for 31 rivers and streams on a longitudinal or multiple site basis. Most showed significant improvement particularly those sampled since 1988. Although a substantial number of miles are still impaired, the severity of the impairment in most streams and rivers has lessened. The most "quantity" of improvement has taken place in streams and rivers predominantly impacted by municipal sources. Less improvement, or no improvement in some cases, was evident in waters primarily impacted by industrial discharges, residual toxic impacts, and extensive habitat modification. The abatement of point source problems has begun to reveal previously masked problems such as combined sewer overflows, agricultural nonpoint runoff, and urban nonpoint sources in certain areas. These will likely increase in importance as the remaining point source impacts are further controlled and reduced. Overall, Ohio has made dramatic improvements in rivers that were grossly polluted 20 to 30 years ago. However, many problem areas remain as illustrated by data on sediment contamination, bacterial contamination, and poor and very poor biological community performance. These areas are indicated on maps in the text and additionally in the appendices.

Fish tissue data is conspicuously lacking for many areas of the state. The results that are available for PCB content in fish tissue (mostly whole-body samples) show a substantial number of areas with concentrations in excess of 2 ppm, a widely accepted level of concern. Fish consumption advisories are currently in effect for 15 different water bodies statewide. An *ad hoc* inter-agency work group is currently examining ways to improve the data collection aspects of this program.

Inland Lakes, Reservoirs, and Ponds

Assessing use support in Ohio's publicly owned inland lakes and reservoirs included an evaluation of beneficial uses for about 33% of the 417 lakes and reservoirs greater than 5 acres in size. Of those assessed, 76% are eutrophic or hypereutrophic, and the remainder are mesotrophic; Ohio has no oligotrophic lakes. For all uses and Clean Water act goals, full support occurred, on average, in 8% of the evaluated acreage, partial support, on average, in 65%, and non-support, on average, in 2%. The remaining 25% attained their full uses or goals, but were considered to be threatened. Major sources of the partial and non-attainment in order of affected acreage were agricultural nonpoint sources, point sources, and other nonpoint sources (urban runoff and septic tanks). Major causes were identified as sedimentation and corresponding loss of volume, nuisance macrophyte growths, nutrient enrichment, and general aesthetics. A description of the program and new activities is included.

Lake Erie

The Lake Erie assessment has not been updated since the 1988 report because no new data were available. Thus the use statistics have not changed. None of the areas were considered to be fully supporting the EWH use. This was due primarily to a lake-wide fish advisory for carp and channel catfish and water column exceedances of criteria for copper and cadmium. All 231 shoreline miles were considered to be partially supporting the EWH use. Sources (of major and moderate influence) included point sources (69%), nonpoint sources (19%), in-place pollutants (3.5%), and other (includes waste disposal, 8.5%). Causes for the partial attainment were toxics (mostly metals, 77%), organic enrichment/dissolved oxygen (14%), and pH (9%). One new addition to the 1990 report is a summary of the Remedial Action Plan (RAP) process and activities for each of the four Ohio areas; Maumee River, Black River, Cuyahoga River, and the Ashtabula River. Some initial results of an assessment of biological data from the 12 major Lake Erie estuary areas is included.

Ohio River

Assessment of the Ohio River resource focused on the level of support of its designated uses (warmwater aquatic habitat, public water supply, and recreation) and the level of achievement of the Clean Water act fishable and swimmable goals. An overall evaluation of beneficial uses indicated full use and goal support for about 30% of the river's 981 miles, partial use and goal support for about 60%, and non-support of uses and goals for about 10%. Major sources of partial support and non-support in the Ohio River were combined sewer overflows, urban runoff, and municipal discharges. Incidence and impact of spills to the river and problems associated with natural effects (droughts) were additional factors affecting use and goal attainment. Causes of partial and non-support were identified as elevated levels of volatile organic compounds, violations of the fecal coliform criterion, and elevated levels of PCBs and chlordane in the tissue of certain fish species.

Economic Assessment

A summary of Ohio EPA's economic assessment methodology for point sources is included. An analysis of incremental wastewater treatment costs for POTWs showed that approximately $3.7 billion have been invested since 1970 to meet water quality standards. Of this amount, $2.7 billion was awarded through the federal construction grants program. Since January 1987 a total of $789 million have been (or will be) spent on water pollution controls (capital costs only).

Program Highlights

Program descriptions and special highlights also reported include; District Surface Water investigation highlights, ground water, wetlands protection, 401 water quality certifications, Ohio River (ORSANCO), toxics strategy, exotic species, and biocriteria.

Although the 1990 report is a comprehensive assessment of the state's water resources, additional areas need future emphasis. Such areas include an expanded fish tissue database, inland lakes and reservoirs, Lake Erie, more detailed comparison of pollution control expenditures with environmental results, and non-aquatic life use concerns such as public water supply, human health, and aesthetics. Increased monitoring efforts are needed in these areas to provide the data necessary to make an assessment. This will also require that certain databases be computerized and "readily available" for use in the 1992 305b report.

Volume 1: Summary, Status, and Trends

Section 1

Introduction

Ohio is a water rich state with nearly 25,000 miles of streams and rivers large enough to be named or designated in Ohio's Water Quality Standards, a 451 mile border on the Ohio River, 2500 lakes and reservoirs, and over 230 miles of Lake Erie shoreline (Figure 1-1). Ohio has ten scenic river systems (ODNR Scenic Rivers Program) with 629 miles of river, the fourth largest total in the nation. Ohio also has extensive ground water resources. Both surface and ground water supplies are important to the economy and welfare of the people of Ohio. The purpose of this report is to summarize the quality or integrity of these waters and describe the trends in the water resources of Ohio.

The 1988 305(b) report marked the first complete integration of the resident aquatic biota as the principal arbiter of aquatic life use attainment. Prior 305(b) reports relied on chemical surrogates *alone* as the arbiters of aquatic life use attainment. The use of biosurvey data in an *integrated* approach to water resource management in Ohio over the past 12 years has culminated in the establishment of ecoregion-based biocriteria in the Ohio Water Quality Standards (Ohio EPA 1990). Much of the assessment information discussed here and reported in Volume II of this report (waterbody–specific assessments) are based on the *integration* of biological, chemical, and physical information. The recent approval of Ohio's Toxic Strategy (Ohio EPA 1989) and the inclusion of criteria for priority pollutants, human health and aesthetics in Ohio's Water Quality Standards (effective May 1990) will lead to a more thorough assessment of this information in the 1992 305(b) report. The human health criteria will be based on a fish consumption route of exposure for all fishable aquatic life uses along with the water ingestion route for all sources that may influence a public water supply.

Figure 1-1. Ohio Statistics.

This water resource inventory focuses on: (1) full integration of the U. S. EPA Waterbody System (WBS-PC) for tracking waterbody assessments, (2) trend assessment (Volume V) of biological indices in rivers and streams that were sampled in the late 70's and early 80's and recently resampled in the late 80's, (3) development of a method, on the basis of the biological performance in a waterbody, to measure the severity as well as the extent (e.g., miles) of impairment as has traditionally been used in the 305(b) report, and (4) a more detailed examination of the agreement and disagreement between integrated (including biosurveys) and chemical measures of aquatic life use attainment.

Underlying all of these areas is the common theme that a simple technology-based or water quality-based approach to water resource management is *alone* insufficient to deal with the remaining problems in our surface waters. When water quality problems were much more obvious the application of standard wastewater treatment technology (e.g., secondary treatment, BPT, BAT) resulted in noticeable chemical improvements in the receiving waters (see trend section). The problems remaining today however, are more subtle and complex and a continued reliance on a technology based solution to these problems would be insufficient. A monitoring approach, integrating biosurvey data with water chemistry data, physical habitat, bioassay, and other monitoring information must be central to accurately define these complex problems. Such information must also be used in tracking the progress of water resource improvements. The arbiter of the success of water resource management programs must shift from a reliance on achieving administrative goals (numbers of permits issued, dollars spent, or management practices installed) and a preoccupation with chemical water quality *alone* to more integrated and holistic measurements with overall water resource integrity as a goal.

Consideration of the factors that affect water resource integrity (Figure 1-2) makes it clear why the above arguments are sound. Efforts to maintain and improve the quality of surface waters first need to identify the perturbations associated with each of the five principal classes of factors that may impair a surface water body. The failure to consider one or more these major factors could lead to an inappropriate management strategy for improving the resource. Thus ambient monitoring must shift from being a "luxury" in water resource programs to becoming an inseparable and integral part of water resource management programs in solving the pollution problems of the 1990s and beyond.

U. S. EPA Waterbody System (WBS-PC)

The 1990 cycle of the biennial 305(b) report marks Ohio's first full use of the U. S. EPA microcomputer software for tracking waterbody assessments. Ohio uses the PC version of the WBS for entering and updating assessment information of waterbodies. Data entered into this system, however, is also uploaded to a mainframe version (at the National Computer Center) of the WBS. The WBS is designed to track waterbody assessments and other information useful for managing water resource programs. It is not a repository for raw water quality or biological data but rather a source of summary information on achievement of the Clean Water Act goals and designated use status. It is a geographically referenced database of stream, river and lake assessments providing estimates of the extent and the

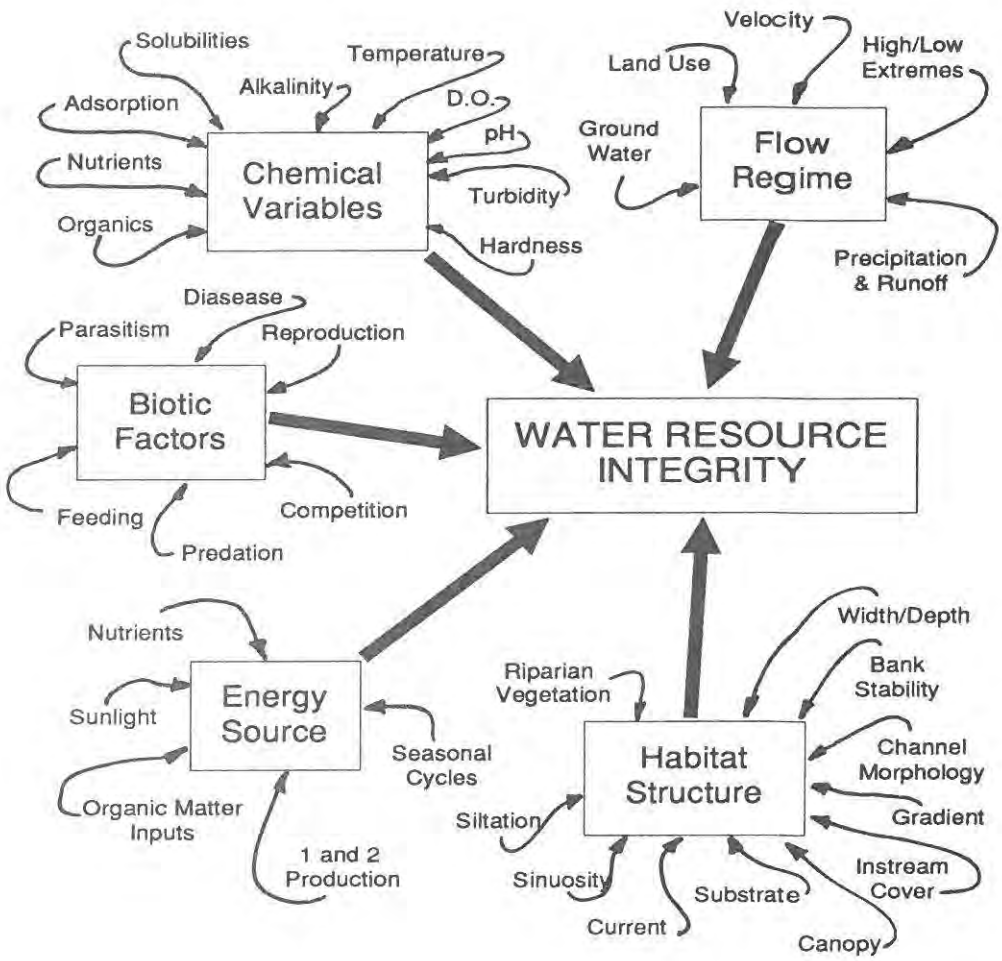


Figure 1-2. The five principal factors, with some of their important chemical , physical, and biological components which influence and determine the resultant integrity of surface water resources (modified from Karr et al. 1986).

causes and sources of instream impairment. All tables in Volumes I-III were generated from the WBS files with custom programs we developed.

In addition to the variables tracked by the U. S. EPA WBS, Ohio EPA maintains numerous data files containing biological, physical, and chemical data that are geographically referenced to the files in the WBS. Such a link between the water resource data and the waterbody assessment files provides the opportunity for improvements in the tracking of water resource assessments in Ohio.

Measures of the Extent and Severity of Impairment

Nationally, tracking of the use attainment status of surface water resources has suffered from an insufficient and biased collection of ambient data. Additionally, there has been an over-reliance on chemical-specific data to the exclusion of more integrative, direct measures of water resource integrity. Without the availability of direct and holistic measures of water resource integrity, tracking of the success of pollution abatement has focused on management activities (e.g., permit issuance) instead of environmental results. The failure to use more direct measures of biological integrity has led to a criticism of the effort to monitor the effects of reduced pollutants in surface waters (U.S. GAO 1987). Although the effluent loadings of many chemical parameters have been reduced since the passage of the original Clean Water Act (Smith *et al.* 1987) it has been difficult to relate this to overall improvements in aquatic life uses other than in specific instances (U.S. GAO 1987). Considering the $50 billion that has been spent and the additional $118 billion projected for municipal WWTP construction up to the year 2000 (U. S. EPA 1982) more effort needs to be devoted towards directly quantifying the environmental results of these activities.

Chemical surrogates of aquatic life use impairment have traditionally been used *alone* to produce estimates of the extent (e.g., miles) waterbodies are attaining or not attaining their use. They provide, however, little consistent information on the severity of pollution other than degree and frequency of chemical exceedances of water quality criteria. This approach to measuring severity can vary greatly among parameters especially when the relationship between timing, frequency, and duration is complex and variable. Reliance on chemical monitoring alone may overlook the fact that: 1) pollution is often episodic and might be missed by typical monitoring programs, 2) some chemical parameters that cause degradation may not be measured or be easily identified, and 3) degradation to stream resources may also be caused by nonpoint pollution and habitat destruction, variables that most chemical monitoring programs cannot easily consider. The goals of the Water Quality Act are fundamentally biological in nature. Estimating the integrity of the biota provides a direct measure of the severity and extent of use impairments which can be used to track the success of pollution control over time, and this relates specifically to the goals of the Clean Water Act.

What Biological Indicators?

Biological community indices such as the Index of Biotic Integrity (IBI), Invertebrate Community Index (ICI), and Index of well-being (Iwb) can provide a consistent framework for estimating both the extent (e.g., miles) and severity (departure from ecoregion standard) of impairment. Further information on these biological indices can be found in Karr (1981), Fausch et al. (1984) and Ohio EPA (1987a,b; 1989a,b). We have developed some simple methods based on these indices to estimate the extent and severity of aquatic life use impairment in waterbodies and weighting factors that account for different potentials of the biota related to ecoregion and aquatic life use. These measures will be used throughout this report and their derivation is briefly explained below. Multimetric parameters

such as the IBI and ICI, etc., are *not* diversity indices. They differ by their use of an array of ecologically relevant information that is based on the principles of community structure and function. As such they provide a more complete and less variable estimation of integrity than the traditional, single dimension diversity indices.

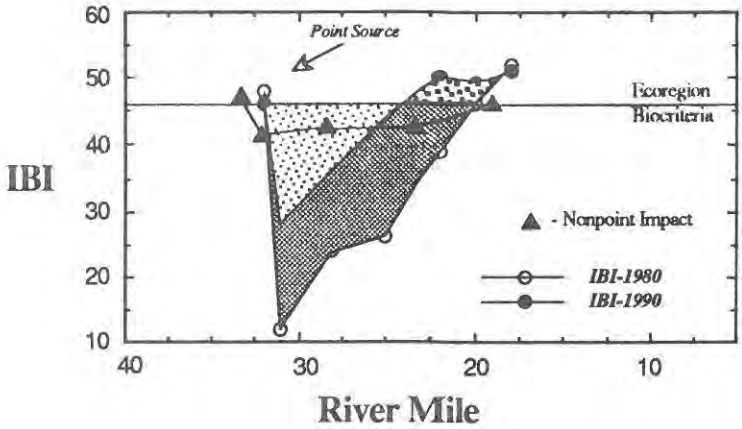


Figure 1-3. Example of the method used to estimate the severity of pollution based on biosurvey data.

Figure 1-3 above provides an illustration of the concept of severity and extent of impairment of the biota as measured by the biological indices (ICI, IBI, modified Iwb). The circles denote sampling locations along a river prior to and following the upgrade of a municipal WWTP. The line labeled "ecoregion criteria" represents the ecoregion expectations for the river in terms of the IBI. The area enclosed by this criterion and the lines connecting the sampling points is the "area impaired" in the waterbody. We multiply this area by a weighting factor of 0.1 times the ecoregion criteria (see Figure 1-3) to reflect the appropriate biotic potential to derive what is termed the Area of Degradation Value (ADV). Another statistic used in the report is the average percent departure of the IBI from the ecoregion biocriterion, labeled *Percent Departure from Biocriteria.*

ADV values can be used to directly quantify improvements in treatment processes in point source programs as illustrated in Figure 1-3. In the situation depicted in Figure 1-3, there is an impairment to the stream in both years of sampling, but improvements in the biota have occurred. With the reduction in the miles of stream impaired between the years there has also been a decrease in the severity of the impact. The line connecting the triangular points represents a less severe impact (on another stream), from a nonpoint source such as row crop production. The important distinction between the case of the nonpoint impairment and the point source impairment is that both impact similar *miles* of stream, but the point-source related impairment is much more *severe*. Thus, the use of biosurvey data and ADV values can distinguish the severity of impairment between stream segments that have similar miles of impairment. In essence, our examination of impairment and the causes and sources of impairment moves from a two-dimensional to a three-dimensional analysis. This addresses the relative influence of various perturbations on surface waters in a more accurate and precise manner. Such an analysis fits well with the theme of an integrated monitoring strategy as a part of the solution to water resource management. Not only can we more accurately determine attainment and non-attainment of aquatic life uses, but we can distinguish increments of impairment. Such information will provide a better understanding of water resource problems which is crucial to restoration of our surface waters.

SECTION 2
Methodology For Assessing Use Attainment

This section provides a description of the procedures used to gauge attainment of aquatic life use criteria. Aquatic life uses in Ohio include Exceptional Warmwater Habitat (EWH), Coldwater Habitat (CWH), Seasonal Salmonid Habitat (SSH), Warmwater Habitat (WWH), Modified Warmwater Habitat (channel-modified: MWH-C; mine affected: MWH-A; impounded: MWH-I), and Limited Resource Water (LRW). Table 2-1 lists sizes of waterbodies for each aquatic life and non-aquatic life use assigned to Ohio surface waters. Aquatic life uses were classified as fully attained, fully attained but threatened, not attained, partially attained, or not assessed.

Table 2-1. Summary of classified uses for Ohio surface waters.

	Size Classified for Use							
	Rivers (miles)							
			Ecoregion					
Classified Use	Total	HELP	IP	EOLP	WAP	ECBP	Lakes (acres)	Lake Erie (shore miles)
Aquatic Life Uses								
WWH	**21,293**	2,872	924	5,332	6,736	5,429		
EWH	**2,644**	29	603	190	1,070	752	200,000[1]	236
CWH	**351**	26	—	66	127	133		
SSH	**103**							
MWH	**60**	—	—	45	—	15		
LWH	**445**	—	70	57	318	—		
LRW	**371**	16	—	17	322	16		
Water Supply								
PWS	—						117,361[2]	
Recreation								
PC	23,309						200,000[3]	236
SC	862							
State Resource Waters								
SRW	3,812						117,361	
ORW							72[4]	

Abbreviations: **WWH** - Warmwater Habitat; **EWH** - Exceptional Warmwater Habitat; **CWH** - Coldwater Habitat; **SSH** - Seasonal Salmonid Habitat; **MWH** - Modified Warmwater Habitat; **LWH** - Limited Warmwater Habitat; **LRW** - Limited Resource Water; **PWS** - Public Water Supply; **BW** - Bathing Waters; **PC** - Primary Contact; **SC** - Secondary Contact; **SRW** - State Resource Waters; **ORW** - Outstanding Resource Waters.

[1]Estimated from ODNR (1982).
[2]All publicly owned lakes and reservoirs except Piedmont Reservoir.
[3]Lakes and Reservoirs and not specifically given a primary contact recreation use in OAC, but this use is assumed.
[4]Lake Katherine and Stages Pond are designated Outstanding Resource Waters in OAC Chapter 3745-1.

The assessment of aquatic life use support and the assigning of causes and sources generally followed the guidelines set out in the *Guidelines for the Preparation of the 1990 State Water Quality Assessment (305(b)Report)* (U. S. EPA 1989). For segments with biosurvey data, physical habitat data, and chemical data the biota was the principal arbiter of aquatic life use. The rationale for using the biota as the principal arbiter of aquatic life use is discussed in other sections of this report and has been discussed elsewhere as well (Karr *et al.* 1986; Ohio EPA 1987a,b Yoder 1989). The criteria for use attainment for the biological indices is summarized in Table 2-2. For chemical data we used the chemical criteria in Ohio's WQS and generally followed the U. S. EPA guidelines for assessing aquatic life support (U. S. EPA 1989) with chemical data (Table 2-3).

Table 2-2 Criteria for determining use attainment based on biological data.

Non-Attainment

A] *Neither ICI, IBI, nor Iwb meet criteria for ecoregion.*

OR

B] *One organism group indicates a severe toxic impact (poor or very poor categories) even if tthe other indicates criteria attainment.*

Partial Attainment

A] *One or Two Indices do not meet ecoregion criteria (if the two indices that do not meet do not suggest severe toxic impact i.e., both are in the fair range)*

Full Attainment

A] *All indices meet ecoregion criteria.*

Table 2-3. Criteria for determining use impairment based on instream chemical data. Levels of significance represent varying degrees of exceedence of chemical criteria.

Non Attainment

Extreme- Level 1 - Inside mixing zone chemical criteria is exceeded by the 10th percentile of instream values.
Extreme Level 2 - Inside mixing zone chemical criteria is exceeded by the 50th percentile (Median) of instream values.
Extreme Level 3 - Inside mixing zone chemical criteria is exceeded by the 90th percentile of instream values.

Major- Level 1 - Maximum outside mixing zone chemical criteria is exceeded by the 10th percentile of instream values.
Major- Level 2 - Maximum outside mixing zone chemical criteria is exceeded by the 50th percentile (Median) of instream values.
Major- Level 3 - Maximum outside mixing zone chemical criteria is exceeded by the 90th percentile of instream values.

Moderate exceedence - Chronic (Average) chemical criteria exceeded by 25th percentile of instream values and the mean is less than the criteria **OR** Chronic (Average) chemical criteria exceeded by 10th percentile of instream values and the mean is greater than the criteria.

Partial Attainment

Minor exceedence - Chronic (Average) chemical criteria exceeded by 10th percentile of instream values and the mean is less than the criteria **OR** Chronic (Average) chemical criteria is not exceeded by the 10th percentile of instream values and the mean is greater than the criteria.

Full Attainment

No - Chronic (Average) chemical criteria is not exceeded by the 10th percentile of instream values and the mean is less than the criteria.

Table 2-4. Categories of deviation from relatively unimpacted reference sites for parameters without aquatic life use water quality criteria

No Effects

(Within Range of Reference Sites)

1. Mean and 90th % tile < Median of reference sites
2. Mean and 90th % tile < 75th %tile of reference sites AND Mean > Median of reference sites and 90th %tile < Median OR 90th % tile > Median of reference sites and Mean < Median.
3. Mean and 90th % tile < 75th %tile of reference sites AND Mean and 90th % tile > Median of reference sites.
4. Mean and 90th % tile < 2* UQ[1] + Median of reference sites AND Mean > 75th %tile of reference sites and 90th %tile < 2* UQ + Median OR 90th % tile > 75th %tile of reference sites and Mean < 2* UQ + Median.

Minor effects

(Upper Range to Slightly Above Range of Reference Sites)

1. Mean and 90th % tile > 75th %tile of reference sites AND Mean and 90th % tile < 2* UQ + Median of reference sites.
2. Mean and 90th % tile < 5* UQ + Median of reference sites AND Mean > 2* UQ + Median of reference sites and 90th %tile < 2* UQ + Median OR 90th % tile > 2* UQ + Median of reference sites and Mean < 2* UQ + Median.

Moderate effects

(Values Significantly Above Range of Reference SIte)

1. Mean and 90th % tile > 2* UQ + Median of reference sites AND Mean and 90th % tile < 5* UQ + Median of reference sites.
2. Mean and 90th % tile < 10* UQ + Median of reference sites AND Mean > 5* UQ + Median of reference sites and 90th %tile < 5* UQ + Median OR 90th % tile > 5* UQ + Median of reference sites and Mean < 5* UQ + Median.

Major effects

(Values Deviate Extremely From Range of Reference SIte)

1. Mean and 90th % tile > 5* UQ + Median of reference sites AND Mean and 90th % tile < 10* UQ + Median of reference sites.
2. Mean and 90th % tile > 10* UQ + Median of reference sites.

[1]UQ-Upper Quartile (75th percentile)

For water quality parameters without aquatic life criteria in the Ohio WQS we compared ambient results to values from a set of reference sites that provide ecoregional and statewide expectations under relatively unimpacted conditions. These "background" expectations were based on work in progress by Dennis Mishne who is examining the ranges of variability of water chemistry and sediment data collected in relatively unimpacted reference sites by ecoregion (the same sites used to

Table 2-5. Concentrations of ambient chemical parameters used to indicate increasing severity of mine affected waters compared to relatively unimpacted reference sites.

Parameter	Median	75th %tile	75th%tile +Median [UQ]	2*UQ + Med.	5*UQ + Med.	10*UQ + Med.
Field Conductivity	445	692	247	939	1680	2915
Lab Conductivity	481	739	258	997	1771	3061
pH[1]						
Chloride	24.6	43.7	19.1	62.8	120.1	215.6
Sulfate	129.0	242.7	113.7	356.4	697.5	1266
Iron	885	1495	610	2105	3935	6985
Manganese	135	300.5	165.5	466	962.5	1790
TDS	443	509	66	575	773	1103

[1]pH categories will follow Ohio WQS and Ohio EPA (1980): No effects: 6.5-9.0; minor effects: 5.5-6.4; moderate effects: 4.5-5.4; severe effects < 4.5.

develop the biological expectations). This comparison was especially useful for waterbodies in Ohio's Western Allegheny Plateau ecoregion that are impacted by mining practices. The degree of deviation from reference site data provided an alternate screen for parameters generally associated with coal mining, but which lack aquatic life use criteria.

Of the above parameters only pH was used to assess aquatic life use impairment in waterbodies (in the absence of biological data) because it is the only parameter listed above with a WQS criteria value. The other parameters were used to confirm mine impacts where pH was low and to screen waterbodies for further study. For streams without pH data or without a pH impairment, streams were identified for future study if two or more of the above parameters indicated moderate or major effects.

Table 2-6. Classification of types of data used to make aquatic life use assessments for the 1990 305(b) report arranged in decreasing order of confidence with regard to data rigor.

Description	Code	Evaluated	Monitored
Most Confidence			
Intensive survey with biological & water chemistry data, both fish and macroinvertebrates sampled[1]	7	—	MB
Intensive survey with biological & water chemistry data, only one biotic group (fish or macroinvertebrates) sampled	6	—	MB
Intensive survey with biological data only, fish or macro-invertebrates sampled	6	—	MB
Intensive survey with water chemistry data only.	6	—	MC
Intensive survey with water chemistry data only (pre-1985)	6	EC	—
Biological Fixed Stations and intensive biosurveys from before 1984.	4	EB	—
Chemical Fixed Stations (NAWQMN, NASQAN, IJC, etc.)	4	EC	—
Least Confidence			
Survey/Source Data (Complaints, surveys, etc.,)[2]	1	ES	—

[1] For headwater streams (< 20 square miles) streams are assigned a level 7 code where water chemistry and only the fish community were sampled.
[2] Aquatic life use attainment decisions are not made with source level data or data types not listed here. Source level data is used to flag areas for further study or to identify areas that are likely to be *impacted* (see Ohio Nonpoint Source Assessment).

The categories assigned to data used in this assessment followed the U. S. EPA guidelines with some exceptions as outlined in Table 2-6. The classification of data collection methods reflects the rigor of the dataused for an aquatic life use assessment. The most rigorous data is an intensive survey that

contains water chemistry sampling, physical habitat data and sampling of both fish *and* macroinvertebrates. For waterbodies where we had only water chemistry data we had more confidence in the situation where a water quality violation occurred (partial or non-attainment) than where no water quality exceedances were observed (full attainment). The narrow focus of the water chemistry data provides less confidence about aquatic life use attainment status than the broader-based biological community measures. Similarly, we have more confidence in our aquatic life use assessments when data from both biotic groups (fish and macroinvertebrates) was available than when only one was available (see Table 2-6 for exceptions). Toxicity test (bioassays) results alone were not used to assess use attainment status.

The assessments in this report relied primarily on monitored level data. Although the focus of the Water Resource Inventory is broad much of the database was originally collected to assess point sources of pollution on larger rivers. For smaller streams there is less monitored level data to assess impacts such as nonpoint pollution. In addition to the Ohio Water Resource Inventory, Ohio EPA produces the Ohio Nonpoint Source Assessment (Ohio EPA 1989), coordinated by the Division of Water Quality Planning and Assessment, that summarizes the effects of nonpoint pollution on Ohio surface water and groundwater. This report relies heavily on an extensive survey of over 200 local, county, state and federal agencies. The data from the questionaires is "source" level data, insufficient to assess aquatic life use impairment but useful for identifying possible areas of nonpoint source impact. This report also incorporated much of the monitored level data reported in the 1988 305(b) report. The results of this assessment were used to develop the Ohio Nonpoint Source Management Program (ODNR 1989) which is coordinated by the Ohio Department of Natural Resources.

The long-term goal of the Ohio EPA is to fully integrate the *results* of the nonpoint assessment into the 305(b) Water Resource Inventory although the detailed analysis of the information collected for this effort will still be summarized in a separate document. This document is part of the effort to qualify for Clean Water Act Section 319 federal funds to abate nonpoint pollution. The detailed level of assessment needed for these extensive sources of impact to aquatic life necessitates a separate document. However, like other complex problems, the power of integrated and broad-based monitoring tools needs to be a basic component to identifying the solution to nonpoint pollution.

For areas of the state sampled with intensive biological surveys the effects of nonpoint sources have been assessed and are reflected in the waterbody segment summaries (Volume II) and in the discussion of causes and sources of pollution found in this volume. Categories of nonpoint sources of pollution that may *impact* a waterbody (but which may or may not have been verified with monitored-level data) are printed for each waterbody in Volume II of the 1990 Water Resource Inventory and in more detail in the Ohio Nonpoint Source Assessment (1990).

The nonpoint causes and sources in the WBS and Volume II of this report are more general than the categories of nonpoint pollution that the 1989 Nonpoint Source Assessment document reports. Table 2-7 lists the broader categories of nonpoint sources identified in this report and the more specific nonpoint categories reported in the Ohio Nonpoint Source Assessment.

Sources and Causes of Impairment

Sources and causes of partial or non-attainment were assigned by waterbody segment as major (H), moderate (M), and minor (S) based on an integrated assessment of the available data and the interpretations of the biologists and scientists who conducted the field investigations. Only causes and sources of impairment that currently exist are listed. Potential causes and sources whose effects are not currently being exhibited are not listed. As a surface water recovers with time some of these causes may become evident and will be listed at that time. The observed reduction in the impaired miles related to causes and sources compared to 1988 is due to: (1) improvements in Ohio surface waters and (2) the ability of the WBS to assign less than the total impaired length for a cause or source, and 3) use of the range of insignificant departure for each biological index. Causes and sources of impairment for individual waterbody segments are listed in Appendix A and Volume II. The assignment of causes and sources here is necessarily broad in comparison to the detailed assessments contained in the Technical Support Documents completed by our staff biologists. As such the detailed information in these and other division documents supersede the information reported here. Subbasins illustrated in maps of causes and sources of non-attainment are referenced in the map in Figure 2-1.

Table 2-7. Key to categories of nonpoint pollution reported in this report and the component categories reported in the 1989 Nonpoint Source Assessment (Ohio EPA 1989).

1990 Water Resource Inventory (WBS)	1989 Ohio Nonpoint Source Assessment
Agriculture	Agriculture
	Crop Production
	Specialty Crops
Livestock	Livestock
	Pasture
Forestry	Silviculture
	Forestry Harvesting
	Road Construction
	Forest Management
Urban	Urban
Storm Sewer	Storm Sewer
Sanitary Sewer	Sanitary Sewer
Surface Runoff	Surface Runoff
Construction	Construction
	Bridge Construction
Mining	Coal Mining
	Surface Mining
	Subsurface Mining
Oil & Gas Production	Oil & Gas Production
Flow Alteration	Hydromodification
	Dam Construction
Habitat Degradation	Channelization
	Dredging
	Streambank Modification
Land Disposal	Land Disposal
	Sludge
	Sanitary Landfill
	Industrial Land Treatment
On Site WWTS	On Site Wastewater Treatment Systems
In-Place Pollutants	In-Place Pollutants

Figure 2-1. Watersheds used for summarizing use attainment in Ohio: **1** - UPPER MAHONING RIVER; **2** - LOWER MAHONING RIVER; **3** - PYMATUNING CREEK; **4** - LITTLE BEAVER CREEK; **5** - CENTRAL TRIBS (YELLOW CREEK AND CROSS CREEK); **6** - CENTRAL TRIBS (SHORT CREEK AND WHEELING CR.); **7** - CENTRAL TRIBS (MCMAHON, CAPTINA, SUNFISH CR.); **8** - LITTLE MUSKINGUM RIVER; **9** - DUCK CREEK; **10** - UPPER TUSCARAWAS RIVER; **11** - NIMISHILLEN CREEK; **12** - CONOTTON CREEK; **13** - SUGAR CREEK; **14** - STILLWATER CREEK; **15** - LOWER TUSCARAWAS RIVER; **16** - BLACK FORK, CLEAR FORK, ROCKY FORK MOHICAN R.; **17** - LAKE FORK, JEROME FORK, MUDDY FORK MOHICAN R.;**18** - KOKOSING RIVER; **19** - KILLBUCK CREEK; **20** - UPPER MUSKINGUM RIVER AND WAKATOMIKA CREEK; **21** - WILLS CREEK; **22** - LICKING RIVER; **23** - MIDDLE MUSKINGUM RIVER; **24** - LOWER MUSKINGUM RIVER; **25** - UPPER HOCKING RIVER; **26** - MIDDLE HOCKING RIVER; **27** - LOWER HOCKING RIVER; **28** - SE TRIBS (SHADE RIVER AND LEADING CREEK); **29** - SE TRIBS (LOWER RACCOON CREEK); **30** - SE TRIBS (UPPER RACCOON CREEK); **31** - SE TRIBS (LITTLE INDIAN GUYAN CREEK); **32** - SE TRIBS (SYMMES CREEK); **33** - SE TRIBS (LITTLE SCIOTO RIVER AND PINE CREEK); **34** - UPPER SCIOTO RIVER (AND LITTLE SCIOTO RIVER); **35** - SCIOTO RIVER (MILL CR.,BOKES CR., FULTON CR.); **36** - UPPER OLENTANGY RIVER; **37** - LOWER OLENTANGY RIVER; **38** - BIG WALNUT CREEK; **39** - BIG DARBY CREEK; **40** - WALNUT CREEK; **41** - MIDDLE SCIOTO RIVER (INCLUDING DEER CREEK); **42** - UPPER PAINT CREEK; **43** - LOWER PAINT CREEK (N. FK. AND ROCKY FK.); **44** - SALT CREEK; **45** - SCIOTO RIVER (SUNFISH CR.,BEAVER CR.); **46** - LOWER SCIOTO RIVER (AND SCIOTO BRUSH CREEK); **47** - SW TRIBS (EAGLE CREEK AND STRAIGHT CREEK); **48** - OHIO BRUSH CREEK; **49** - SW TRIBS (WHITEOAK CR.,INDIAN CR., BEAR CR.); **50** - UPPER LITTLE MIAMI RIVER; **51** - CAESAR CREEK; **52** - TODD FORK; **53** - EAST FORK LITTLE MIAMI RIVER; **54** - LOWER LITTLE MIAMI RIVER; **55** - UPPER GREAT MIAMI RIVER; **56** - GREAT MIAMI RIVER AND LORAMIE CREEK; **57** - STILLWATER RIVER; **58** - MAD RIVER; **59** - TWIN CREEK; **60** - MIDDLE GREAT MIAMI RIVER; **61** - FOURMILE CREEK; **62** - LOWER GREAT MIAMI RIVER AND WHITEWATER RIVER; **63** - WABASH RIVER; **64** - ST. MARYS RIVER; **65** - ST. JOSEPH RIVER; **66** - BLANCHARD RIVER; **67** - LOWER AUGLAIZE RIVER; **68** - OTTAWA RIVER; **69** - LITTLE AUGLAIZE RIVER; **70** - UPPER AUGLAIZE RIVER; **71** - UPPER MAUMEE RIVER (INCLUDING GORDON CREEK); **72** - TIFFIN RIVER; **73** - UPPER MIDDLE MAUMEE RIVER; **74** - LOWER MIDDLE MAUMEE RIVER; **75** - LOWER MAUMEE RIVER (AND OTTAWA RIVER); **76** - LAKE ERIE TRIBS MAUMEE R. TO PORTAGE R.; **77** - UPPER PORTAGE RIVER; **78** - LOWER PORTAGE RIVER; **79** - TYMOCHTEE CREEK; **80** - UPPER SANDUSKY RIVER; **81** - MIDDLE SANDUSKY RIVER; **82** - LOWER SANDUSKY RIVER; **83** - LAKE ERIE TRIBS SANDUSKY R. TO VERMILION R.; **84** - VERMILION RIVER; **85** - HURON RIVER; **86** - BLACK RIVER; **87** - ROCKY RIVER; **88** - UPPER CUYAHOGA RIVER; **89** - LOWER CUYAHOGA RIVER; **90** - LAKE ERIE TRIBS (CHAGRIN RIVER); **91** - UPPER GRAND RIVER; **92** - LOWER GRAND RIVER; **93** - ASHTABULA RIVER AND CONNEAUT CREEK.

304(l) lists

This report contains two 304(l) lists of impaired waterbodies in fulfillment of the listing requirements of the Water Quality Act (WQA) of 1987. These lists will be used for setting priorities for issuing permits for toxic discharges and identifying areas for further monitoring and assessment. The rationale for placing segments on one of the 304(l) lists that are included in this report follows U.S. EPA guidance. The two 304 (*l*) lists are:

Long List - All segments which cannot attain or maintain Water Quality Standards due to *any* cause including, toxic pollutants, "conventional" pollutants such as dissolved oxygen and pH, physical impacts such as channelization, general impacts from nonpoint sources, and other problems of unknown cause and origin (Appendix A; also see Volume II).

Medium List - Segments which cannot attain or maintain Water Quality Standards due substantially to priority pollutants (selected organics, heavy metals), "conventional" toxic pollutants (including ammonia and chlorine), whole-effluent toxicity from point sources, or toxic impacts of nonpoint origin . This list is a subset of the long list.

A separate ***Short List*** was produced in 1988 and includes a group of stream segments that do not attain or maintain Water Quality Standards due substantially to ***point*** sources of ***priority*** (307(a)) pollutants. NPDES permits for point sources located in these segments were to have been issued by Febraury 4, 1990. *This list was not updated for the 1990 report.*

Streams that meet their designated uses or streams for which we have insufficient data are not listed. The two 304(l) lists are derived from the integrated analysis of all the various causes and sources of impairment to waterbodies that is summarized and entered into the WBS. Types of data that were examined includes the biological impairment data, ambient water column chemistry data, sediment chemistry data, bioassay information, wasteload allocations for metals, organics, ammonia, and chlorine, mass-balance dilution screening for priority pollutants taken from Form 2C (industrial) and municipal pre-treatment scans, fish kill data, and fish tissue data (including fish advisories).

Biological Community Indices and Chemical Indicators of Aquatic Life Use Attainment

Prior to a discussion of the designated use support, status, and trends of Ohio surface waters it is important to understand the degree of sensitivity and accuracy of the various types of information used to determine or infer aquatic life use attainment and non-attainment. Some methods employ a direct assessment of aquatic life impacts (i.e., biological community indices) while other methods (e.g., chemical specific surrogates, bioassays) are indirect measures of aquatic life use attainment and non-attainment. In most cases the direct methods can detect both attainment and non-attainment of an aquatic life use. Surrogate methods, in reality, can only *indicate* non-attainment of an aquatic life use. In addition, the detection of exceedances of chemical water quality criteria *alone* may not provide an

accurate or complete description of the relative influence of *all* problems that affect a given waterbody. When no exceedances of a chemical criterion are indicated the possibility of a parameter not measured being exceeded, of physical (habitat) degradation, of temporal impacts, or of biological impacts precludes a truly definitive statement about aquatic life use **attainment**. For instance, when chemical criteria seemingly indicate the absence of an impairment (i.e., no exceedances of chemical criteria in the results) several impairment possibilities remain: (1) chemical parameters other than those sampled for are exceeded, (2) impairments of a non-toxic nature exist, (3) impairments due to physical impacts (e.g., habitat modification, flow alteration) exist, and/or (4) impairments related to biological interactions (e.g., exotics, disease) exist. *None of these will be detected or fully understood using ambient chemical assessments alone.*

The Ohio 1988 305(b) report addressed this situation in a general, waterbody level analysis. The analysis was redone with additional data from 1988 and 1989 (Figure 2-2). In the 47% of the waterbodies chemical criteria and biocriteria agreed on attainment/non-attainment status (Figure 2-2). In 49.8% of the waterbodies, however, the biocriteria indicated impairment but the chemical criteria did not or, in the situation with the fewest cases, the chemical criteria indicated impairment

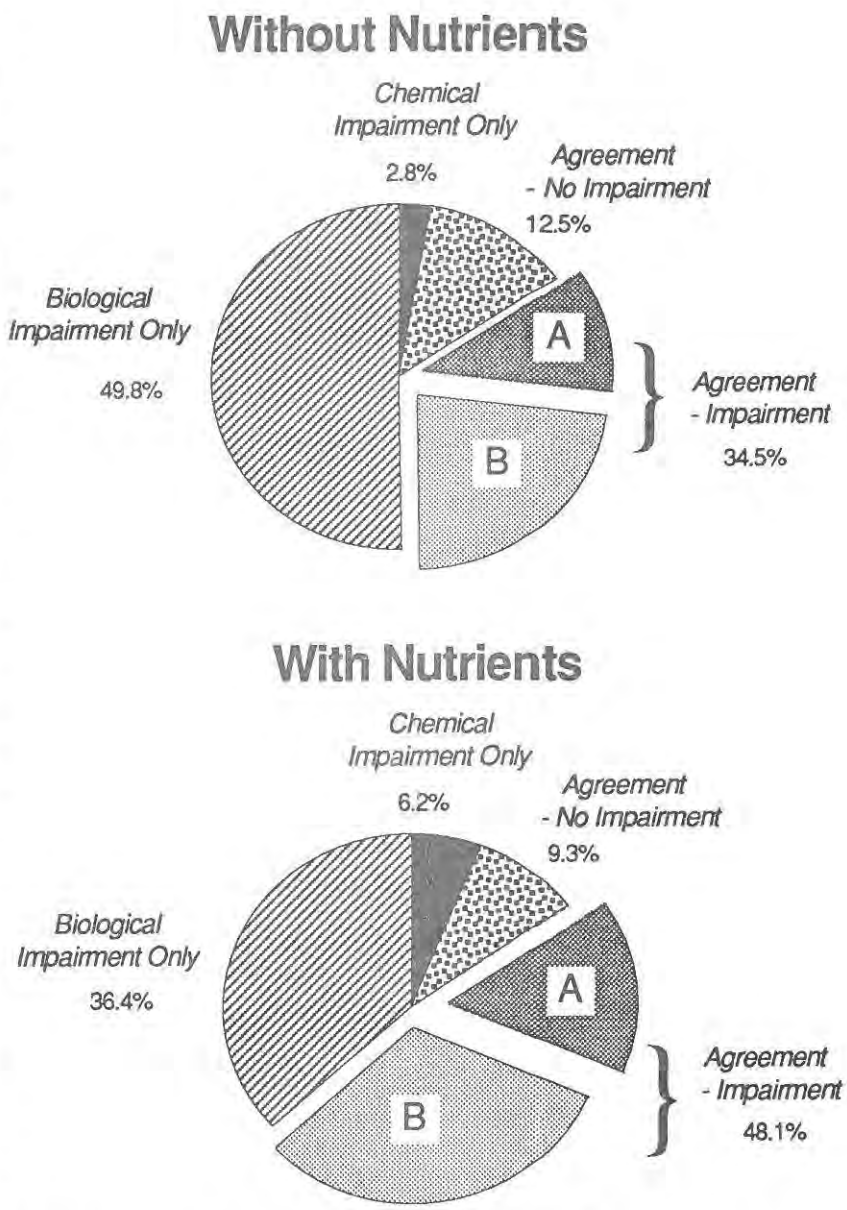


Figure 2-2. Comparison of chemical criteria based versus biocriteria based assessments of aquatic life use attainment without (TOP PANEL) and with (BOTTOM PANEL) the inclusion of nutrient parameters and indicators of aquatic life use impairment. Portions of the graphs labeled **A** *are those waterbodies where both methods indicated chemical factors alone were responsible for aquatic life impairment; portions of the graphs labeled* **B** *are those waterbodies where the biosurvey-based analysis indicated other causes of impact exclusively or in addition to water chemistry impacts.*

but the biocriteria did not (2.8%). When nutrient parameters were included in the water chemistry assessment (with indication of impairment related to deviations from ecoregion-based reference sites), the ability of the assessment to detect aquatic life impairment improved (Figure 2-2, Lower Panel). This improvement may be related to correlations among nutrients and other non-chemical parameters that cause impairment (e.g., elevated phosphorus often correlated with sedimentation) rather than to the direct effects of the nutrients on aquatic life. In fact, contributions of non-chemical causes of impairment are important in nearly two-thirds of the waterbodies used in this analysis, nearly all of which would be overlooked or underrated by relying on chemical data alone to detect impairment.

Table 2-8. Some possible explanations for agreement and disagreement between biosurvey and chemical surrogate methods of assesing aquatic life use attainment.

Situation 1. *Biological data indicates non-attainment of aquatic life use but chemical surrogates show no exceedances of water quality standards*

Possible Causes:

1. Physical problems causing non-attainment (e.g., habitat degradation).
2. Chemicals other than ones sampled responsible for degradation.
3. Temporal impacts not detected by chemical sampling.
4. Non-toxic impacts that cause shifts in community function (e.g., nutrient enrichment).
5. Chemical Water Quality Criteria are not protective enough.
6. Biological factors impact the resource (e.g., introduction of exotic species).

Situation 2. *Biological data indicates attainment, but chemical surrogates suggest non-attainment of aquatic life use*

Possible Causes:

1. Duration and frequency of chemical criteria exceedance is not sufficient to cause a biological impairment.
2. Chemical criteria are overprotective of the aquatic life use.
3. Measurement technique for the chemical that shows exceedance is not indicative of actual toxicity to aquatic life (e.g., total metals measured, but criterion was based on studies of the effects of dissolved metals on aquatic life).
4. Site specific variation in toxicity to parameters in exceedance.

Situation 3. *Biological data and chemical surrogates indicate non-attainment of aquatic life use*

Possible Causes:

1. Chemical data accurately portrays extent of instream impairment.
2. Chemical data accurately portrays part of problem instream but fails to detect problems of importance (see situation 1).
3. Chemical data shows exceedance of aquatic life criteria but overestimates the influence of the parameter(s) in relation to the actual factors responsible for non-attainment of the aquatic life use.

Appendix I of this report examines in more detail the situations where the biota and chemistry data agree and disagree on aquatic life use attainment. From this analysis it is obvious that the traditional, narrow use of chemical criteria alone is insufficient to detect many of the more subtle impairments to aquatic life. Table 2-8 lists the possible reasons for agreement and disagreement between biocriteria and chemical criteria based methods of assessing use attainment. The purpose of this analysis was not to "prove" that biocriteria are a superior measure of aquatic life use attainment, but rather, to illustrate that an integrated chemical, physical, and biological assessment of a water resource is critical to *accurate* water resource management. This type of information is important to efforts to reduce the in-

consistencies among states in their assessments of aquatic life use impacts in reports such as this. In the 1988 National Water Quality Inventory (U.S. EPA 1990) the U.S. EPA calls for: "increased monitoring in order to verify this [status of unassessed waters] and gain a more accurate picture of the Nation's waters as a whole". For this call to be successful, the choice of the correct monitoring tools becomes critical.

Comparison of Bioassay Results With Instream Biological Community Performance: A Preliminary Analysis

In addition to the biosurvey-based versus water chemistry assessment analysis described above we compared the results of acute bioassays conducted for 43 entities with the results of instream biological assessments (*i.e.* biosurveys - see previous section) in the receiving waters. This was a general comparison of the level of "agreement" between the two different evaluations. Agreement in this analysis can occur in two ways: 1) both the bioassay and biosurvey results indicate an impairment, the character of the latter being predominantly toxic, and 2) neither assessment shows impairment, or any biosurvey impairment is not of a predominantly toxic character. A more extensive analysis of this data is contained in Appendix J.

Bioassay results were obtained from standard 48 hour screening and 96 hour definitive tests using *Ceriodaphnia* and fathead minnows (*Pimephales promelas*) per Ohio EPA methods (Ohio EPA 1990). Biosurvey results were from Ohio EPA biological and water quality surveys as described earlier in this section and in Ohio EPA (1987, 1989a,b). Agreement between bioassay and biosurvey results was designated as ***Good***, ***Fair***, or ***None*** as follows:

1) ***Good***: Bioassay results and instream community response had a strong agreement. Bioassay results indicating acute toxicity were correlated with biosurvey results that were strongly indicative of toxicity; or, no bioassay toxicity was evident and the instream results did not indicate a strong response to toxicity.

2) ***Fair***: Agreement was not strong, but an effect from toxicity could not be ruled out. In such situations the bioassay results indicated toxicity, but the instream response pattern indicated something other than acute toxicity as the *predominant* impact. Instances with impairment in the instream community that were not strongly indicative of toxicity, but where acute toxicity was found in the effluent or mixing zone, were usually placed in this category.

3) ***None***: This was applied when the instream response was characteristically non-toxic, even though some toxicity may have been apparent in the bioassay test results. The coincidental occurrence of acute toxicity and instream impairment *alone* was not sufficient reason to rate the agreement as ***Good*** or **Fair.**

The overall results of the comparison show ***Good*** agreement in 16 of the 43 comparisons, ***Fair*** agreement in 14 cases, and ***None*** in the remaining 13 comparisons (Figure 2-3). The level of agreement was lowest for the effluent only scenario, followed by the effluent/mixing zone category. The

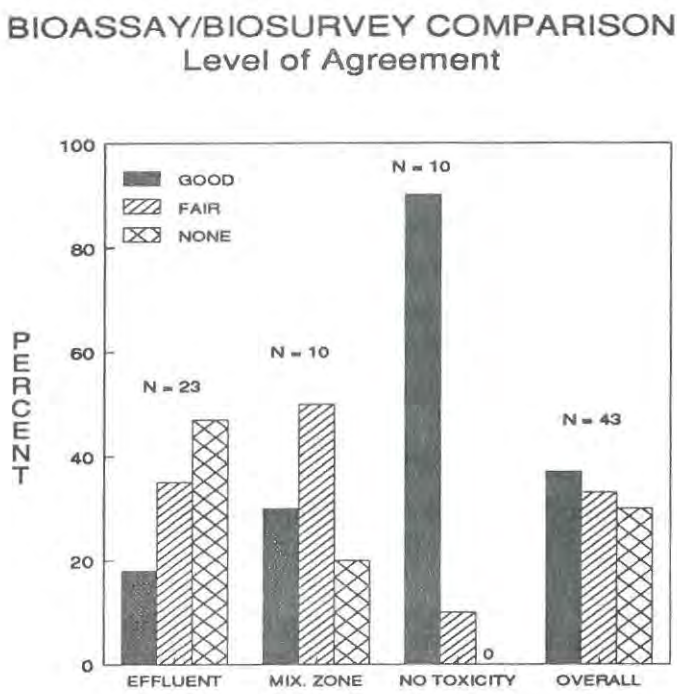


Figure 2-3. Level of agreement of toxicity between bioassay and biosurvey results comparing three categories of bioassay results (EFFLUENT - effluent toxicity only; MIXING ZONE - effluent and mixing zone toxicity; NO TOXICITY - <20% mortality).

no toxicity scenario had a 90% ***Good*** level of agreement (Figure 2-3). The near complete agreement of the biosurvey results with the no toxicity category combined with the incomplete agreement with the other two categories might lead to the perception that biosurvey results are not sufficiently sensitive to detect instream problems resulting from toxicity. This perception might prove true if the biosurvey results in this category all showed *attainment* of the biocriteria. However, the majority of the biosurvey results in the no toxicity category showed *significant impairment* of the ecoregional derived biocriteria (see Appendix J). This indicates that impairment existed in the apparent absence of effluent or mixing zone toxicity, presumably due to some other source. In addition instream community performance varied widely within each of the three toxicity test categories further demonstrating the sometimes "independent" response of the biota. Biological index scores showed approximately the same range and relative distribution between each of the three toxicity test categories.

The results of this analysis indicate that the mere observance of acute toxicity, or lack thereof, in an effluent and to a lesser degree in mixing zones, is not necessarily reflected by the instream communities. Other impacts often pre-empt and possibly mask the potential effects of the observedbioassay toxicity. The frequency and duration of acute toxicity along with the mixing and dilution characteristics of the receiving waters greatly influence how it will be eventually expressed in the instream community. These results should not be misconstrued to claim toxicity testing and monitoring is an invalid assessment and regulatory tool. Quite to the contrary, we have seen the instream biota respond strongly to toxic effluents where the severity, duration, and impact were sufficient to cause problems in the receiving waters. Used in combination, bioassay and biosurvey together make a powerful and accurate assessment tool.

More testing and analysis is needed if we are to understand better the strengths and limitations of bioassays and biosurveys. A more detailed comparison including percent mortality, effluent toxicity variability, instream waste concentrations (IWC), area of degradation values (ADV), and revisiting the bioassay validation issue with the new generation instream community measures should result in a better understanding of these relationships. This would undoubtedly support the formulation of more accurate and effective regulatory approaches.

Section 3

Designated Use Support

Rivers and Streams

Aquatic life use support in Ohio is based on an assessment of 7,444 miles of *monitored* data (Table 3-1). Of the 7444 miles of streams we have monitored, many have been sampled two or more times. There are approximately 21,000 miles of "named" streams (i.e. streams large enough to be named on USGS 7.5' topographic maps and listed in ODNR's Gazateer of Ohio streams, ODNR 1960). We have also collected monitoring data in what we consider significant unnamed streams. In addition, the lengths of some of the named streams have been underestimated (we have collected data from upstream of their reported lengths) and making the actual total greater than 21,000 miles. The estimate of 43,917 Ohio stream miles given by the Ohio Department of Natural Resources (1960) includes many small streams that are not capable of supporting permanent aquatic communities. Thus, for this report we estimate that we have data on 7444 miles out of an estimated total 25,165 miles of Ohio streams with designated aquatic life uses (named and significant unnamed streams for which we have data) as the universe of stream miles in Ohio.

Overall, our sampling coverage reflects a concentration of effort in: (1) larger streams and rivers drainage areas > 50-100 sq mi), and (2) streams in which there are documented or suspected problems. For instance, we have assessed approximately 90-95% of the "known" or suspected problems in urban areas at least once. This is a natural result of the greater use humans make of larger streams and rivers, especially with regard to industrial uses (as water sources and places of discharge), municipal uses (drinking water and sewage discharge), transportation and urban development. Work we have done in smaller streams was often related to point source issues, although all possible impacts are assessed during intensive surveys. Anthropogenic effects on small streams may be more diffuse and related to agriculture and other landuse activities in the watershed. These caveats should be kept in mind when interpreting the data presented in this section. In the 1988 inventory cycle, before the biocriteria had become part of Ohio's water quality standards, we reported *any* deviation from the proposed biocriteria as an impairment without allowing for non-significant deviations due to data variability. In the 1990 inventory we only considered "significant" deviations as impairment of an aquatic life use designation as outlined in the biocriteria guidance documents (Ohio EPA 1987b). The 1988 report results were adjusted and are also presented throughout the document for comparison with the 1990 data; this data should be used in place of the 1988 document for making direct comparisons.

The 1990 305(b) adds monitored data on 960 miles (136 segments) of which 305 miles are from new segments, and 655 miles as follow-up surveys on segments for which we had earlier information. The total proportion of rivers and streams meeting their aquatic life uses has improved slightly between the 1988 and 1990 inventory (Table 3-1). When data from 1988 and 1989 only are used a higher *proportion* of miles are considered meeting their uses compared to the data for all years (since 1978) up to 1990 (Figure 3-1). We believe this represents the general improvement in the aquatic life resulting from pollution control efforts during the 1980s. The site specific trends presented in Volume V support this view.

Table 3-1. Summary of aquatic life use support in Ohio rivers and streams.

Category	EWH	WWH	MWH	CWH	LWH	LRW	Total
"Universe" of Total Miles:	**2,644**	**21,293**	**60**	**351**	**445**	**372**	**25,165**
			All Data: 1990 Monitored and Evaluated Biological & Chemical				
Miles Assessed	1194.3	5504.9	60.2	179.7	242.8	262.3	7,444.2
Miles Attaining	380.3	1654.5	8.2	92.9	76.5	18.6	2,231.0
Miles Threatened	137.1	233.6	0.0	53.7	12.8	0.0	437.2
Miles Partially Attaining	397.4	1053.9	20.2	17.3	34.3	17.4	1,540.5
Miles Not Attaining	279.6	2562.9	31.8	15.8	119.2	226.3	3,235.6
Miles Unknown[2]	426.4	3143.1	0.0	50.3	129.8	91.1	3,840.7
			All Data 1988				
Miles Assessed	999.7	5468.6	60.2	179.7	200.6	230.1	7138.9
Miles Attaining	293.9	1601.6	8.2	92.9	77.0	18.6	2,092.2
Miles Threatened	100.0	225.6	0.0	53.7	12.8	0.0	392.1
Miles Parially Attaining.	335.7	1112.3	20.2	17.3	35.3	17.4	1,538.2
Miles Not Attaining	270.1	2529.1	31.8	15.8	75.5	194.1	3,116.4
Miles Unknown[2]	418.2	3061.0	0.0	50.3	124.9	63.6	3,718.0
			Monitored Data				
			Biological Data[1]				
Miles Attaining	294.7	652.6	8.2	25.4	55.3	6.2	1042.4
Miles Threatened	104.8	199.1	0.0	41.0	12.8	0.0	357.7
Miles Partially Attaining	238.7	683.8	2.6	10	34.3	0.0	969.4
Miles Not Attaining	87.5	1437.1	4.7	4.6	62.5	41.6	1638.0
Miles Unknown[2]	255.5	1319.2	0.0	21.8	65.2	3.7	1662.7
			Chemical Data[3]				
Miles Attaining	0.0	45.8	—	—	0.5	1.0	47.3
Miles Threatened	0.5	0.0	—	—	0.0	0.0	0.5
Miles Partially Attaining	0.0	6.4	—	—	0.0	0.0	6.4
Miles Not Attaining	0.5	24.5	—	—	23.6	58.2	106.8
Miles Unknown[2]	1.7	280.9	—	—	2.0	50.9	335.5
			Evaluated Data				
			Biological Data				
Miles Attaining	71.5	423.6	0.0	32.8	6.8	11.4	546.1
Miles Threatened	31.8	24.6	0.0	7.2	0.0	0.0	63.6
Miles Partially Attaining	158.2	356.0	17.6	7.3	0.0	13.1	552.2
Miles Not Attaining	177.8	965.8	27.1	3.5	12.4	92.5	1279.1
Miles Unknown[2]	99.5	556.7	0.0	0.0	12.8	0.0	669.0
			Chemical Data[3]				
Miles Attaining	14.1	531.5	—	34.7	13.9	0.0	594.2
Miles Threatened	0.0	9.9	—	5.5	0.0	0.0	15.4
Miles Partially Attaining	0.5	7.7	—	0.0	0.0	4.3	12.5
Miles Not Attaining	13.8	133.8	—	7.7	20.7	34.0	210.0
Miles Unknown[2]	69.7	978.9	—	28.5	49.8	36.5	1163.4

[1]Segments with biological data (*at least*) to determine support.
[2]Length of assessed segments for which there was insufficient data to ascertain aquatic life use support.
[3]Segments with chemical data alone (*no biological data*) to determine support.

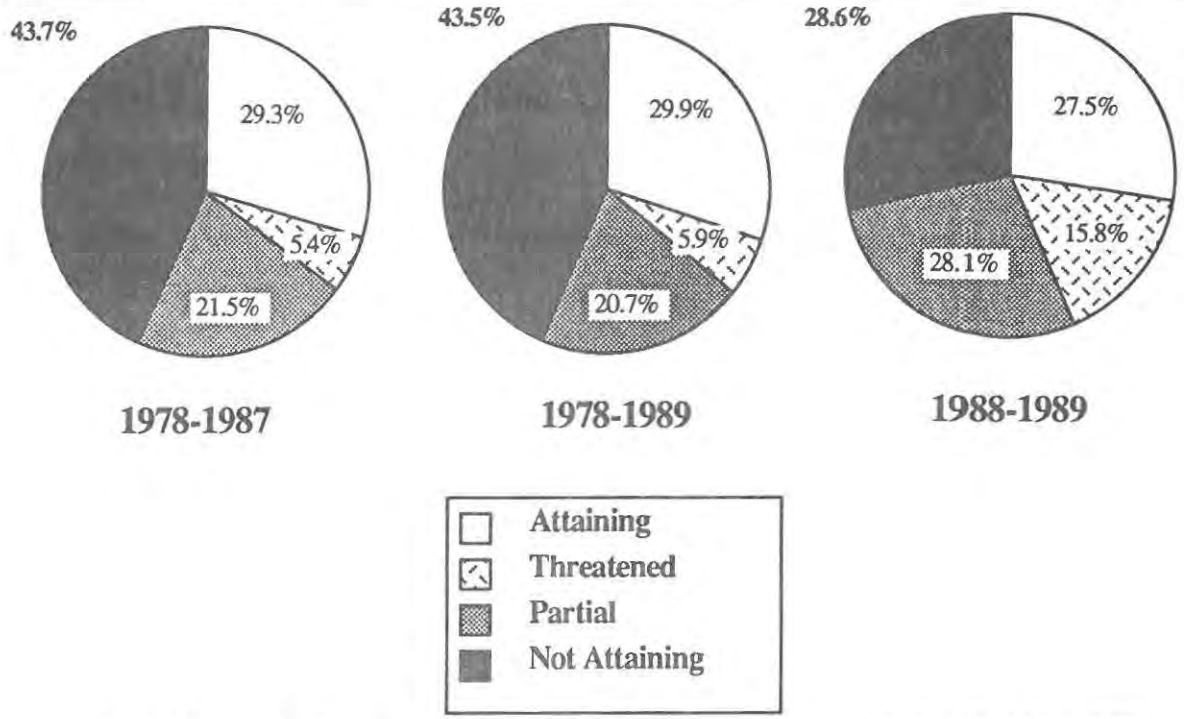


Figure 3-1 Aquatic life use attainment status for Ohio streams and rivers during 1978-1987, 1978-1989, and 1988-1989.

Table 3-2. Summary of aquatic life use and CWA goal support in Ohio's publicly owned lakes, ponds, and reservoirs of greater than 5 acres in surface area. Data from 417 lakes (117,323 acres).

	CWA Goals		Use Support Category:	
	Fishable	Swimable	PWS	EWH
Lakes/Reservoirs Assessed:				
Number	14	178	100	101
Acres	26,015	102,731	84,773	91,607
Use Support Unknown - Insufficient Data:				
Number	403	239	317	316
Acres	91,346	14,630	32,588	25,754
Fully Supports Use:				
Number	5	10	4	15
Acres	15,601	3,993	1,339	4,803
Threatened:				
Number	5	40	26	34
Acres	9,278	16,960	21,652	29,798
Partially Supports Use:				
Number	2	117	63	48
Acres	865	75,722	60,962	56,564
Does Not Support Use:				
Number	2	11	7	4
Acres	271	6,056	820	443

There are ecoregional trends in aquatic life use attainment which are directly related to land use practices and the industrial and population characteristics of these regions (Figure 3-2). The Huron Erie Lake Plain (HELP) exhibits the most impairment and the Western Allegheny Plateau the least. The HELP ecoregion is intensively farmed and its streams have been extensively modified; the WAP, in contrast, has regained much of its forest cover over the past 40-50 years and its streams generally have good habitat (outside of mine affected areas). More information on these regional patterns is discussed in section 4.

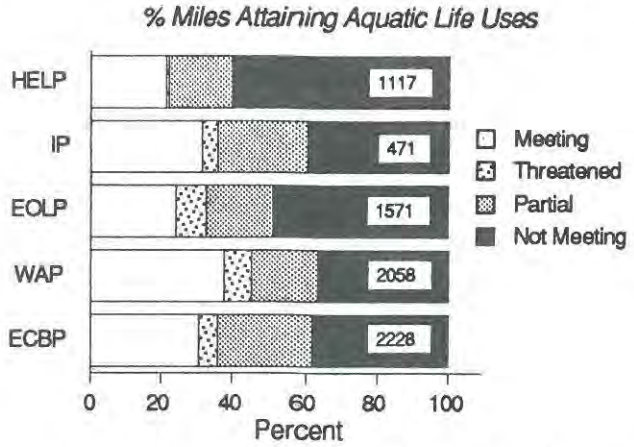


Figure 3-2 Percent attainment of aquatic life uses in Ohio streams and rivers by ecoregion for all data types. Number on bars denote total miles assessed.

The 1990 305(b) incorporates data from several important areas that we have recently revisited and where we have seen significant improvements from the late 1970s and early 1980s. Because of these changes we have dedicated a separate Volume (VolumeV) to examining these areas. Volume V makes it clear that the recent changes in the aquatic life impairment status is a real trend and not a statistical aberration, although it also emphasizes that the complete attainment of all aquatic life uses and Clean Water Act goals is a complex problem that will extend well into the next century.

Table 3-3 Summary of aquatic life use and CWA goal support in Lake Erie.

Category	CWA Goals Fishable	Swimable	Use Support EWH
Total Shoreline Miles[1]:**236**			
Full	0[2]	231	0
Partial	236	5	236
Not	0	0	0

[1] Includes Sandusky Bay.
[2] The principal reason for 0 miles attaining the CWA fishable goal and EWH use support is the lake-wide fish tissue advisory for carp and channel catfish and nearshore copper and cadmium levels.

Table 3-4. Summary of CWA fishable goal support in Ohio's streams and rivers by Aquatic Life Use.

Category	EWH	WWH	CWH	MWH/LRW/LWH	Total
"Universe" of Total Miles:	**2,644**	**21,293**	**351**	**877**	**25,165**
Miles Assessed	1194.3	5486.7	179.7	565.3	7688.2
Miles Supporting	508.8	1868.5	146.6	—	2523.9
Miles Part. Supporting	405.9	1058.8	17.3	—	1482.0
Miles Not-Supporting	279.6	2559.4	15.8	—	2868.1
Miles Not Attainable	—	—	—	565.3	565.3
Miles Unknown[2]	426.5	3114.5	50.3	220.9	3812.2

[2]Length of assessed segments for which there was insufficient data to ascertain aquatic life use support.

Lakes, Reservoirs, and Ponds

Table 3-2 summarizes support of the Exceptional Warmwater Habitat (EWH) aquatic life and Public Water Supply (PWS) uses and achievement of the CWA fishable and swimmable goals for Ohio's 417 publicly owned lakes, ponds, and reservoirs of greater than 5 acres in suface area. Support was determined using specified parameters of the Ohio Lake Condition Index (LCI) following guidelines described in Davic and DeShon (1989) and revised in Volume III of this report. As can be seen in the table, goal and use support are unknown for 66% of the 417 lakes due to insufficient data. Much of the information available is either evaluated data (i.e. BPJ) or monitored data more than 10 years old. Only 77 lakes have been assessed with new data collected since 1988. For all classes of goal and use support, most assessed lakes fell into two categories - supporting but threatened (on average about 25% of the assessed lakes) or partially supporting (on average about 65% of the assessed lakes). Non-attainment of a goal or use was fairly uncommon, on average affecting less than 8% of the assessed lakes by number and about 2% of the assessed lakes by surface acreage. Full attainment occurred, on average, for about 8% of all the assessed acreage.

Lake Erie

The aquatic life use attainment status and Clean Water goal support has not changed in Lake Erie since the 1988 305(b) report (Table 3-3). The causes for the partial aquatic life use attainment (nearshore copper and cadmium levels) and partial support of the fishable goal (fish consumption advisory) still remain. Some of these problems are being addressed through Remedial Action Plans (RAPs) discussed in Section 10.

Ohio River

Assessment of the Ohio River resource focused on the level of support of its designated uses (warmwater aquatic habitat, public water supply, and recreation) and the level of achievement of the Clean Water Act fishable and swimmable goals. Detailed analyses of water quality conditions in the Ohio River can be found in ORSANCO (1990). The Ohio EPA has performed some preliminary fishery surveys in the

nearshore areas of the river. Comparisions of day and night electrofishing catches from the nearshore waters of the Ohio River has shown night sampling to be more effective than day sampling because, during the evening, many fish move to the shallows from deeper off-shore habitats occuppied during the day (Sanders 1988, Sanders and Yoder 1989). Night catches contain significantly more species, higher numbers (excluding gizzard shad and emerald shiners) and weight of fish, and compositionally are more evenly distributed.

Night sampling results from 1988 and 1989 (RM 81.6 - 487.4) have shown relatively good fish assemblages inhabit the river. Shoreline assemblages, at most locations, are composed of 20 or more species and typically include one or more pollution sensitive species (*Hiodon spp., Moxostoma spp., Percina spp., Etheostoma spp.*). Several locations (Marietta and Porstmouth) have also yielded outstanding catches of nongame and endangered species, which is an indication of a healthy aquatic resource. Additional night sampling is planned for 1990 to further develop this method into a long-term monitoring program for the mainstem.

The ORSANCO 1990 305(b) Report

Analyses indicated that the use of the river as a warmwater aquatic habitat was fully supported for 165.1 river miles and partially supported for 815.9 miles. The use of the Ohio River as a public water supply was partially supported for all 981 river miles. This conclusion was based on the incidence and impact of spills to the river, the level of volatile organic compounds in certain sections, and the problems of natural effects such as the drought conditions of 1988. Recreational use of the Ohio River was fully supported for 578.7 river miles, partially supported for 64.0 river miles and not supported for 338.3 river miles. These conclusions were based on the frequency of violations of the fecal coliform bacteria criterion. Partial and non-attainment of this use were attributed to combined sewer overflows, urban runoff, and municipal discharges.

The CWA fishable goal was evaluated based on current fish consumption advisories issued by Ohio River states. The goal was fully attained in 434.4 river miles and partially attained in 546.6 river miles. The issuance of fish consumpton advisories by Pennsylvania, West Virginia, Ohio, and Kentucky in 1989 resulted in a large increase in river miles not fully attaining this goal compared to water years 1986 and 1987. Advisories were issued due to levels of PCBs and chlordane in fish tissue of certain species (primarily catfish and carp) exceeding action levels established by the U.S. Food and Drug Administration. The major source of the PCBs and chlordane was believed to be urban runoff, but additional sources are possible. The majority of fish with elevated levels of these two compounds were collected downstream from urban areas. The CWA swimmable goal was evaluated using the analysis of the recreational use of the Ohio River. As such, miles of full, partial, and non-support as well as attributable sources were the same as that for the recreational use analysis.

Section 4

Causes and Sources of Non-Support of Aquatic Life Uses in Ohio Surface Waters

Rivers and Streams

Here we summarize the causes and sources of aquatic life use impairment and their relative contribution to non-attainment of aquatic life uses and Clean Water Act goals. Causes of impairment are defined as the actual agents that affect the aquatic life use. Sources of impairment or impact are defined as the entity or activity from where the pollutant or effect originated. For example a source of metals (a cause of impairment) may be a WWTP or a industrial process (sources), elevated nutrients (cause) may originate from row crop production (source). The extent (miles) of surface waters affected by various causes and sources of partial or non-attainment of aquatic life uses in Ohio are listed in Tables 4-1 and 4-2 for rivers and streams, Tables 4-4 and 4-5 for lakes, and Tables 4-6 and 4-7 for Lake Erie. Volume II summarizes this same information for each individual water body that was assessed. The causes and sources of impairment listed for a waterbody are those that elicit the principal effects in the biota or chemistry data, not every "possible" cause that may impact the stream. In a stream severely impaired by toxics, for example, all of the *current* observed impairment may attributable to toxics. Other causes that could potentially show impacts in the absence of the impairment by toxics are not included. As the stream recovers with control of the toxic problem, other problems (e.g., nonpoint pollution) may become evident and then listed as a cause if they are a continuing source of impairment.[1]

For causes and sources of impairment, this evaluation is most representative of the larger streams and rivers. This data addresses nearly 80% of the State's principal watersheds with drainage areas > 100 sq.mi. Although coverage of smaller streams is less comprehensive, many of the causes and sources have consistent ecoregional patterns that are characteristic of the major land uses in these areas; these patterns will be discussed below. This discussion focuses on the "high" and "moderate" magnitude categories (H and M codes of the WBS) as the *predominant* causes of impairment, but not the only causes of impact to these segments. The analysis of impact severity with ADV statistics included below adds a "third dimension" to the discussion of causes and sources that was, heretofore, unavailable.

Figure 4-1 on the following page illustrates the miles (*extent*) of aquatic life use impaired by various causes (high and moderate magnitude) based on monitored level data. This information is also listed in Table 4-1 for streams and rivers, Table 4-2 for lakes, and Table 4-3 for Lake Erie. The relative *severity* of each cause (where we had sufficient biological data) in terms of average % departure from the biocriteria is illustrated in Figure 4-2. To the right of each bar in Figure 4-1 in parentheses is the rank (in terms of miles impaired) of the causes from the 1988 305(b) (which is essentially based on data from the early to mid 1980's). Figure 4-3 summarizes the causes of impairment by ecoregion

[1]Listing of causes/sources differs from Ohio Nonpoint Assessment where cause and source data was based partly on data from an extensive questionaire.

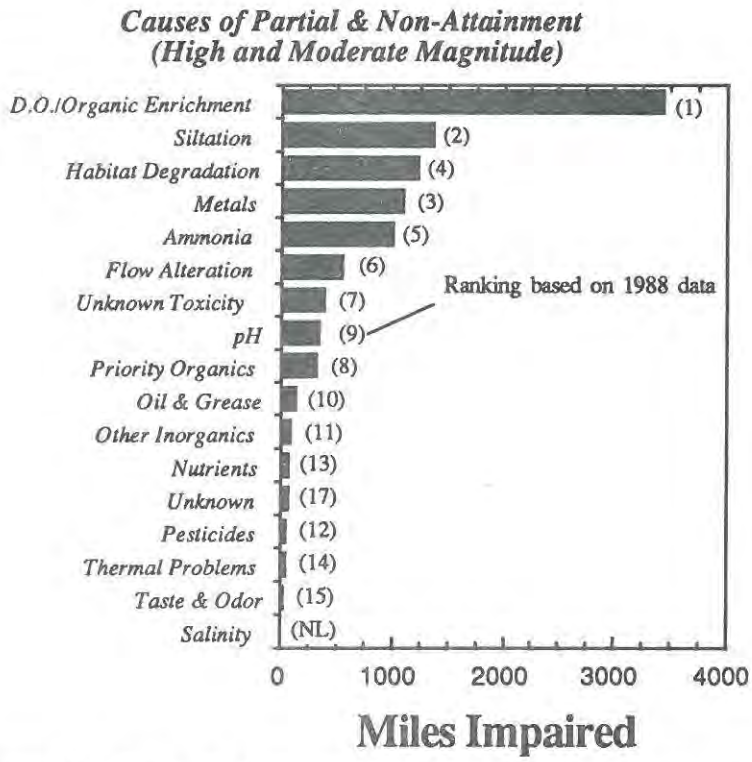


Figure 4-1. Bar chart of high and moderate magnitude causes of impairment in Ohio streams and rivers. Numbers in parentheses denote 1988 rank of causes.

in a stacked bar chart. Figure 4-4 maps the highest ranking (in terms of extent) causes of impairment in each of the 93 subbasins in Ohio; Figure 4-5 does the same for major sources of impairment. Each of the major causes and sources of impairment (and regional patterns) in Ohio are discussed individually below. We limited this analysis to waterbodies with monitored level data (based on chemical criteria and biocriteria) to allow comparisons of the severity (ADV statistics) as well as the extent (miles) of impairment. The Ohio Nonpoint Assessment (Ohio EPA 1989) extends its assessment to "evaluated" level data that incorporates the results of an extensive questionaire. Elements of this report will be discussed within parts of the following sections.

Table 4-1. Relative assessment of causes of impacts (i.e., miles[1]) causing non-support of aquatic life uses in Ohio streams and rivers.

	Water Years 1977-1989			Water Years 1977-1987		
Causes	Major Impacts	Moderate Impacts	Minor Impacts	Major Impacts	Moderate Impacts	Minor Impacts
Habitat modification	606.6	624.5	290.0	547.4	569.3	280.7
Ammonia	576.8	432.6	44.5	645.5	457.7	44.5
Siltation	633.8	743.1	386.8	621.8	779.7	368.9
Organic enrich./DO	2618.8	593.3	160.7	2672.9	589.1	135.8
Metals	595.9	512.3	222.2	609.9	554.2	200.4
Pesticides	53.3	2.8	32.7	53.3	2.8	32.7
Unknown toxicity	198.3	193.0	52.0	278.3	187.2	38.4
Priority organics	147.1	165.8	27.2	123.5	205.5	27.0
Nonpriority organics	—	—	—	—	—	—
Chlorine	12.4	11.2	35.1	20.3	29.5	35.1
Other inorganics	65.2	18.4	21.4	65.2	17.9	21.4
Nutrients	32.5	42.3	20.8	2.2	31.6	5.8
pH	290.8	44.1	11.6	218.7	40.6	1.5
Flow Alteration	392.2	156.3	123.7	367.8	122.8	121.7
Pathogens	—	—	—	—	—	—
Radiation	—	—	—	—	—	—
Oil and grease	63.6	67.0	25.7	63.6	55.4	25.7
Taste and Odor	11.6	—	—	12.1	—	—
Nitrite	—	—	—	—	—	—
Unknown cause	58.9	10.7	6.9	—	—	—

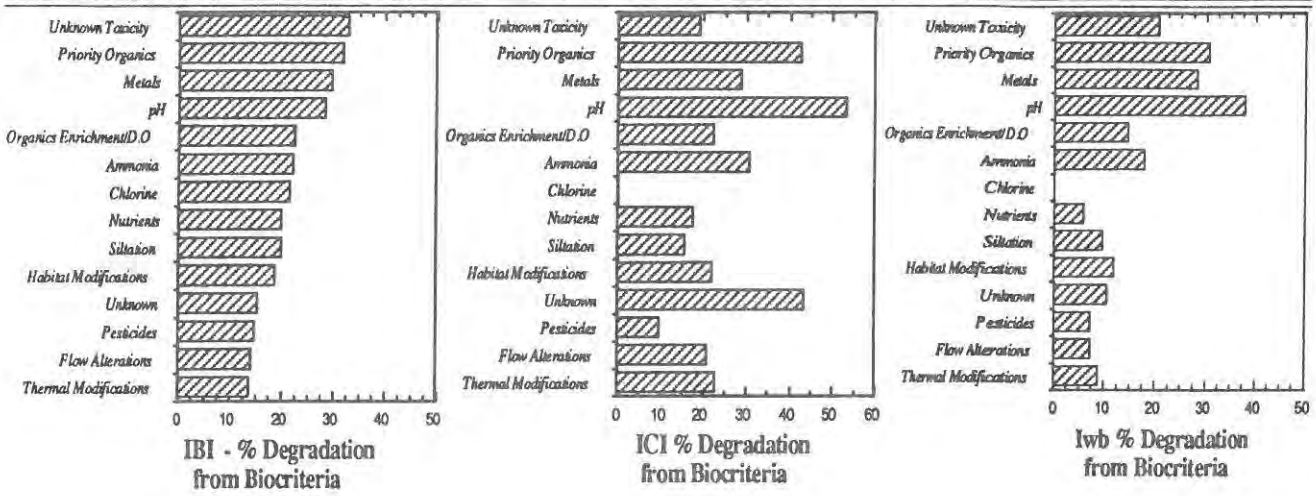


Figure 4-2. Average Percent Departure from the Biocriteria for the IBI, ICI, and MIwb for each of the high and moderate magnitude causes of impairment to streams and rivers in Ohio for locations with biosurvey data. This is not the percentage of occurence for each impairment cause.

Organic Enrichment/Dissolved Oxygen

Organic enrichment/dissolved oxygen problems were important influences in over 3000 miles of impaired or partially impaired streams (33% of all impaired miles) and was the number one cause (High or Moderate Magnitude) of non-attainment of aquatic life uses in both the 1988 and 1990 inventories. This category includes a wide range of specific problems ranging from severely depressed dissolved oxygen levels to indirect problems caused by over-stimulated algal production. Although much of the current water program emphasis is on toxic causes of impairment, low dissolved oxygen and related causes of impairment still account for the greatest number of stream miles impaired by point and nonpoint sources in all ecoregions of Ohio (Figure 4-3).

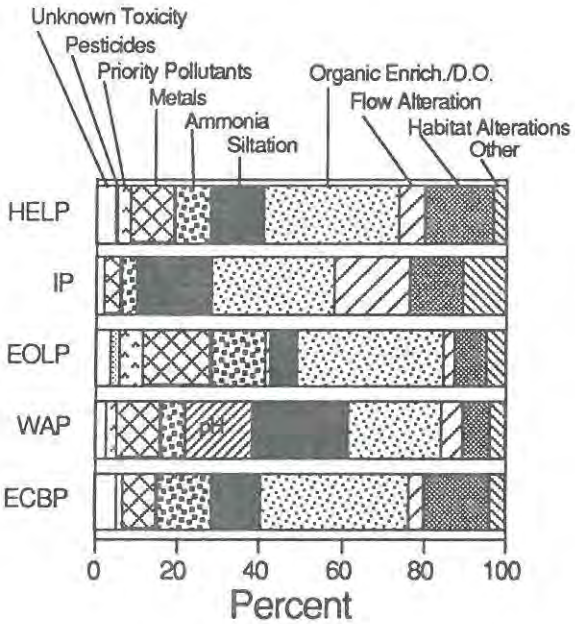


Figure 4-3. Causes of aquatic life impairment in Ohio by ecoregion

Of the miles of stream impaired by organic enrichment/dissolved oxygen problems (moderate and major magnitude problems) reported here 40.4% of the miles are related principally to point sources, 14.3% are related principally to nonpoint sources, and 45.3% are a combination of point and nonpoint sources. The dissolved oxygen/organic enrichment impacts from nonpoint sources examined here tend to be less severe (average departure from biocriteria: IBI = 15.3%, Iwb = 6.9%, ICI = 18%) than the point source related dissolved oxygen/organic enrichment impacts (average departure from biocriteria IBI = 21.7%, Iwb = 11.3%, ICI = 17.7%). Many of the problems reported through the Ohio Non-

point Assessment questionaire, however, may be chronic or sub-chronic organic enrichment problems that might affect more miles of stream than reported here. The extent of these nonpoint-related problems will be further verified through integrated assessments in the future. Perhaps the most important message from this data is that the current emphasis on toxics control should not cause the water program to overlook the existing problems with conventional pollutants.

Table 4-2. Relative assessment of sources of impacts (i.e., miles[1]) causing non-support of aquatic life uses in Ohio rivers. Major, moderate, and minor impacts refer to the high, moderate, and slight magnitude codes of the U.S. EPA guidance for the 305(b) report.

Sources	Major Impacts	Moderate Impacts	Minor Impacts
I. Point Sources	2,405.1	947.0	300.5
Industrial	744.8	351.7	163.1
Municipal	1945.2	589.4	143.0
Combined Sewers	102.2	59.9	—
Stormwater Sewers	—	17.2	—
II. Nonpoint Sources	1,618.4	1,277.8	1,782.9
Agriculture	635.4	547.5	867.4
Silviculture	5.5	—	12.4
Construction	6.8	31.8	29.6
Urban Runoff	275.4	492.1	393.4
Mining	594	73	192.3
Land Disposal	143.8	141.8	383.8
III. Habitat Modification	644.7	662.4	375.0
Channelization	413.7	362.7	215.2
Dredging	6.9	—	5.0
Dam Construction	97.1	172.2	70.5
Flow Regulation	88.4	77.0	30.4
Riparian Destruction	72.1	43.8	54.5
Streambank Disturb.	47.8	52.2	14.2
Flow loss due to modification	21.0	4.7	—
IV. Other	664.0	310.2	174.8
Natural Conditions	202.9	60.0	71.7
In-place contaminants	169.1	92.8	52.6
Misc.	84.0	110.4	33
Waste Storage	38	11.3	—
Highway maintenance	13.4	—	—
Spills	32.6	99.1	14.4
Unknown	232.0	43.0	36.1

[1] Miles counted add to more than total miles because more than one source can be major, moderate, or minor in a segment.

Siltation

Siltation is the second leading cause (high and moderate magnitude) of non-attainment of aquatic life uses, as it was in 1988. Often, as acute causes of non-attainment are resolved (e.g., ammonia, toxics), other impacts that were previously masked begin to emerge and become evident. Silt is just

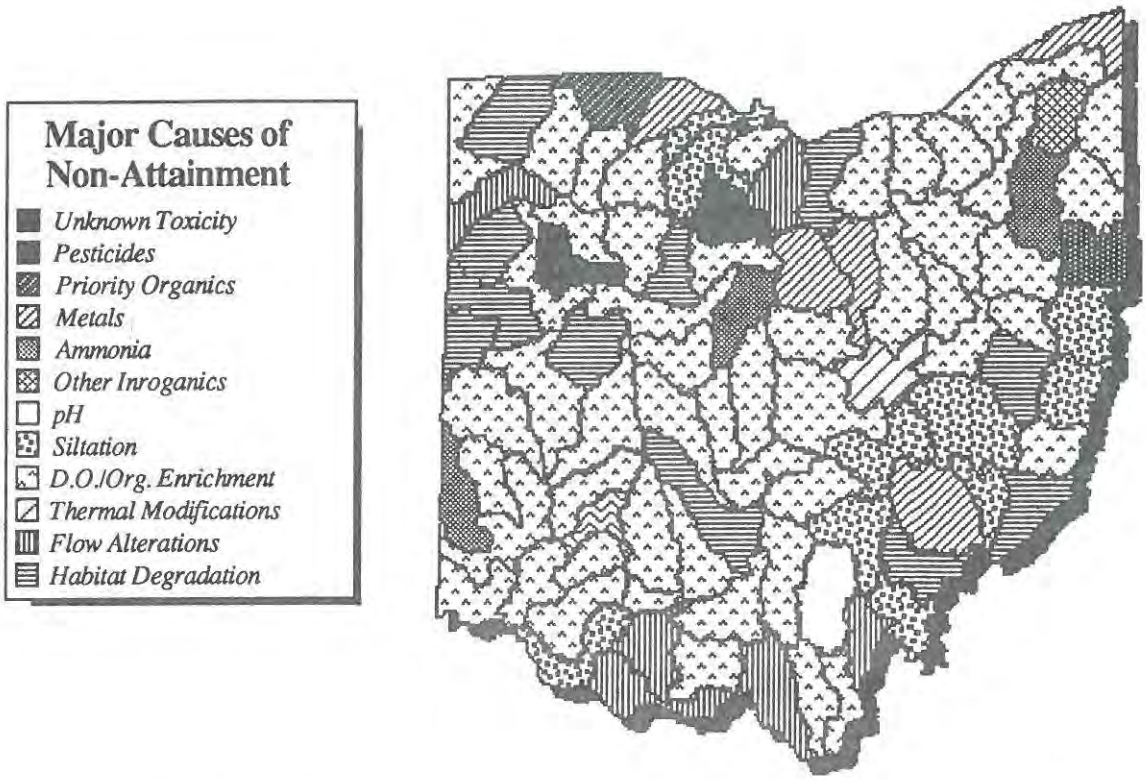


Figure 4-4. Map of the high and moderate magnitude causes of aquatic life impairment in each of 93 Ohio subbasins.

such a chronic cause of non-attainment. In the middle Scioto River a reduction in some of the overriding causes of impairment (e.g., ammonia and low dissolved oxygen) has resulted in the achievement of the WWH biocriteria, but factors such as siltation are now likely precluding the full attainment of EWH in the downstream segments that have the physical potential to support that use (see Volume V).

The effects of siltation have long been associated with the decline of certain fish species in Ohio surface waters (Trautman 1981). The Ohio Nonpoint Source Assessment, using survey data, reports that the impacts of siltation in Ohio are extensive. Siltation alone usually does not preclude attainment of the WWH use, particularly in agricultural areas, unless it is severe and coupled with other habitat impacts. It does however have a critical effect on EWH use attainment. The species associated with the high biological index scores commensurate with the EWH use are usually intolerant of siltation and its associated effects. The effects of siltation on aquatic life are probably the most apparent in ecoregions of Ohio where *both:* (1) erosion and runoff are high, and (2) the morphology of streams results in a long retention time of sediments allowing greater deposition on the bottom. Streams where habitat is intact and the gradient and flow are moderate to high often show less impairment from siltation than low gradient streams with poor habitat (e.g., as in the HELP ecoregion; see section on habitat modification).

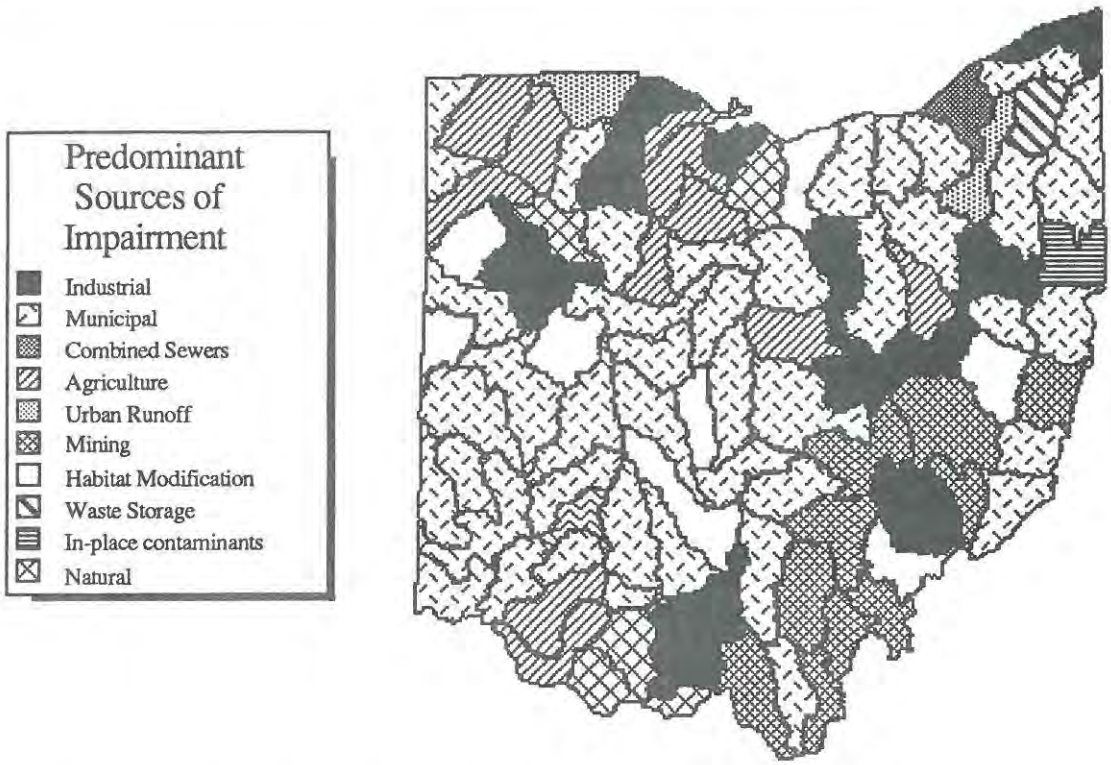


Figure 4-5. Map of the predominant high and moderate magnitude sources of aquatic life impairment in each of 93 Ohio subbasins. This map does not include sources that "impact" streams and rivers in each subbasin, but which do not impair existing uses.

The severity of impairment related to silt is often *less* than other causes of impairment (Figure 4-2), except where the source of siltation is mine-related. The amount of silt generated from surface mining is often much greater than other sources, such as agriculture. High percentages of mine related silts are common in the Western Allegheny Plateau ecoregion (Figure 4-3). Mine runoff impacts also include other stressors (e.g., low pH, high metals concentrations) that also adversely affect the biota.

Habitat

Habitat modification impairment included over 1200 miles of streams and rivers. This is an increase of more than 100 miles from the 1988 report, a large enough increase to move habitat degradation ahead of metals in relative importance (Figure 4-1) as a high or moderate cause of impact. The total effects of habitat degradation in Ohio are likely underestimated, especially in smaller rivers and streams of the Huron-Erie Lake Plain (HELP) ecoregion (Figure 4-3). The majority of the streams draining less than 100 square miles in this ecoregion have been extensively modified to improve drainage for agriculture. None of these streams attain the biological performance levels that exist in similarly sized streams of Ohio's four other ecoregions. Thus, the relative contribution of habitat-related causes of aquatic life impairment are undoubtedly greater than illustrated in Figure 4-3.

The Qualitative Habitat Evaluation Index (QHEI; Rankin 1989, Ohio EPA 1989b) is an index

used to assess macro-habitat quality in Ohio's streams and is used to help determine the ability of streams to support a given aquatic life use. Figure 4-6 is a map of the QHEI values from a series of relatively unimpacted reference sites and habitat impacted locations by ecoregion. On this map the larger, dotted circles represent better quality habitat typical of streams that can achieve the WWH or EWH use designations, crosses denote intermediate levels of habitat quality, and triangles denote lower quality habitat, much of which is due to physical degradation. Although most regions of the state contain both high and low scoring streams, the HELP ecoregion is characterized by sites with extensive habitat modification and an almost complete absence of sites with good habitat in smaller streams. The relative predominance of habitat/siltation effects in the northwest part of Ohio are also illustrated on the maps of the predominant causes (Figure 4-4) and sources (Figure 4-5) of impairment by subbasin .

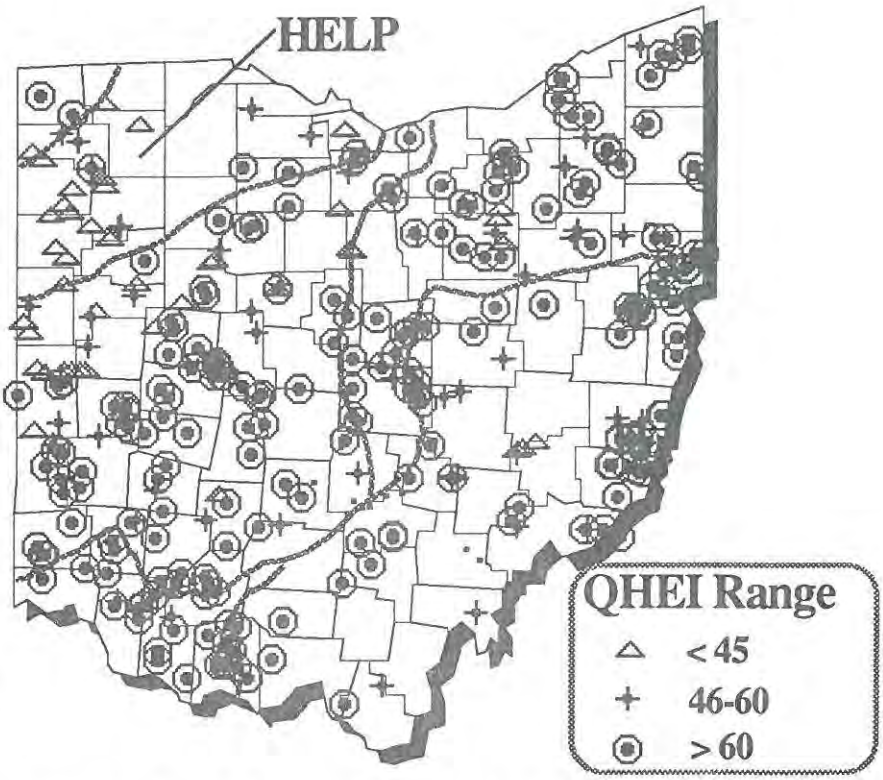


Figure 4-6. Map of QHEI scores from reference sites and sites with modifed habitat in small Ohio streams (generally < 400 sq mi).

Good habitat quality is critical to maintaining diverse and functional fish and macroinvertebrate communities in streams and rivers. Streams with intact habitats achieve higher biological index scores and are better able to resist and recover from point and nonpoint sources of pollution. Habitat protection and habitat restoration, however, are rarely considered in the assessment and management of point sources or as best management practices in reducing the effects of nonpoint pollution. This attitude must change if we are to fully restore impaired aquatic life uses that are principally due to these causes.

pH

The Western Allegheny Plateau ecoregion contains most of the streams in Ohio impaired by low pH (Figure 4-3). As the major coal-mining region of Ohio this is not suprising. Although mine-related impacts in this region of Ohio are known to be extensive, less is known of the *severity* of impairment

to the biota in many of these streams, especially those with less extensive mining. Many of the impacts from mining are non-toxic *per se* and are related to high rates of sedimentation (although the sediment may have toxic properties in certain instances). Although only one subbasin in Figure 4-4 indicates that pH is the predominant problem, mining also contributes to the severe problems in these streams through sedimentation (Figure 4-4); Figure 4-5, illustrates this by identifying the predominance of mining sources in the WAP ecoregion.

The true extent of mining impacts in this area are underestimated by this analysis because many are assumed to be chemically very severe and as a result little effort has been expended on a thorough biological characterization of these waters. The Ohio Nonpoint Assessment (1990) suggests that >3000 miles of streams in Ohio are impacted, impaired, or threatened by mining, most of this in the Western Allegheny Plateau ecoregion. Where pH has been documented as a cause of moderate or major magnitude the impacts to the biota are often as severe as toxic parameters such as metals and priority organics (Figure 4-2). Biosurveys in the WAP demonstrate the existence of some exceptional biological communities where mining effects are not too extensive.

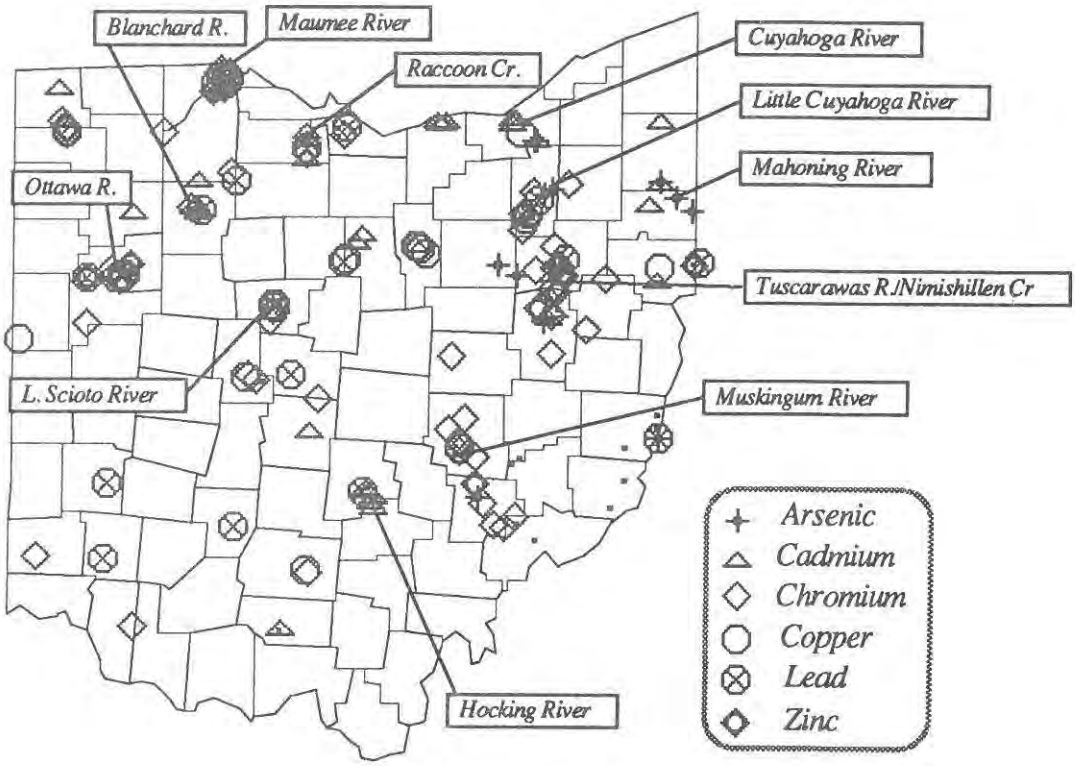


Figure 4-7. Locations in Ohio with highly elevated and extremely elevated metals in the sediments of streams and rivers (criteria based on Kelly and Hite [1984]). Data was collected from 1982 - 1989.

Metals

Of the priority pollutants that impact Ohio surface waters, the priority metals are responsible for approximately three times as many impaired miles as priority organics. This is also due to differences in sampling effort, but relatively few organic substances are routinely found in the water column or sediments. The subbasins most heavily impacted are those in the vicinity of major industries and large urban areas (Figure 4-2), especially the Eastern-Ontario Lake Plain (Figure 4-3). Metals are discharged from industrial and municipal sources as well as from combined sewer overflows (CSOs) in urban areas. There is a decreasing trend, however, in the relative contribution of metals to instream impairment. Between 1988 and 1990 metals dropped from the third ranking cause of non-attainment to the fourth in terms of proportion of miles impaired or partially impaired (high and moderate magnitude). High and extreme concentrations of metals in sediments (Figure 4-7) are distributed near cities that have or have had heavy industry (e.g., Canton, Massillon, Youngstown, Cleveland, Lima, and Toledo). Rivers near large cities without an extensive base of heavy industry (Columbus, Dayton, Cincinnati) generally have fewer high and extreme levels of metals in their sediments (Figure 4-7).

Ammonia

Unionized ammonia concentrations still remain as a cause of substantial impairments to aquatic life uses. Although ammonia ranks fifth in importance (miles impaired by major and moderate ammonia problems) the total miles affected decreased from 1103 to 1009 miles. Because the technology readily exists to remove ammonia from discharges (particularly municipal WWTPs) we expect the impact of this cause to continue to decrease as upgraded treatment facilities continue to come on-line and the municipal revolving loan fund takes effect. Effects from ammonia, however, can be biologically severe (Figure 4-2). When instream ammonia levels are elevated fish and aquatic organisms often exhibit sublethal effects such as high rates of eroded fins, lesions, and other anomalies. As illustrated in Table 2-9 exceedances of the chronic ammonia criterion are rare in streams that have exceptional biological communities and are more common in ecoregions with high population densities (EOLP, Figure 4-3).

Flow Alteration

The effects of flow alteration on aquatic life uses have increased since the 1988 inventory (491 to 549 miles, moderate and major magnitude). Flow alteration includes activities such as removal of water for irrigation, water supply, or hydroelectric generation. The effects of flow alteration were exacerbated statewide by the drought in 1988 which resulted in major rivers going intermittent downstream from major water supply impoundments. This is a cause of impairment that is most evident with an integrated assessment including biological, physical, and chemical sampling methods. Chemical sampling methods alone can easily under estimate the direct effects of flow alterations.

Priority Organics/Unknown Toxicity

Although waterbodies affected by priority pollutants and unknown toxicity decreased slightly from the 1988 inventory, they remain a consistently severe cause of impact in Ohio rivers and streams (Figure 4-2). Most of the priority organics and unknown toxicity are associated with industrial processes and currently there is much emphasis on their control. Like ammonia and metals, priority organics are most commonly found in regions with high population and heavy industry such as the Erie-Ontario Lake Plain ecoregion (Figure 4-3). Ohio's criteria for many of these compounds, especially for human health, will be more fully incorporated into future editions of this report. In many respects we are just beginning to address many of the human health concerns related to toxic parameters. Unknown toxicity is generally assigned as a cause when the instream biota shows a toxic response and no chemical specific cause category is apparent. Effluent bioassay results can also assist in assigning this cause, but only when confirmed by the instream response of the biota. The section "Biological Response Signatures" in this volume discusses how instream biological data is

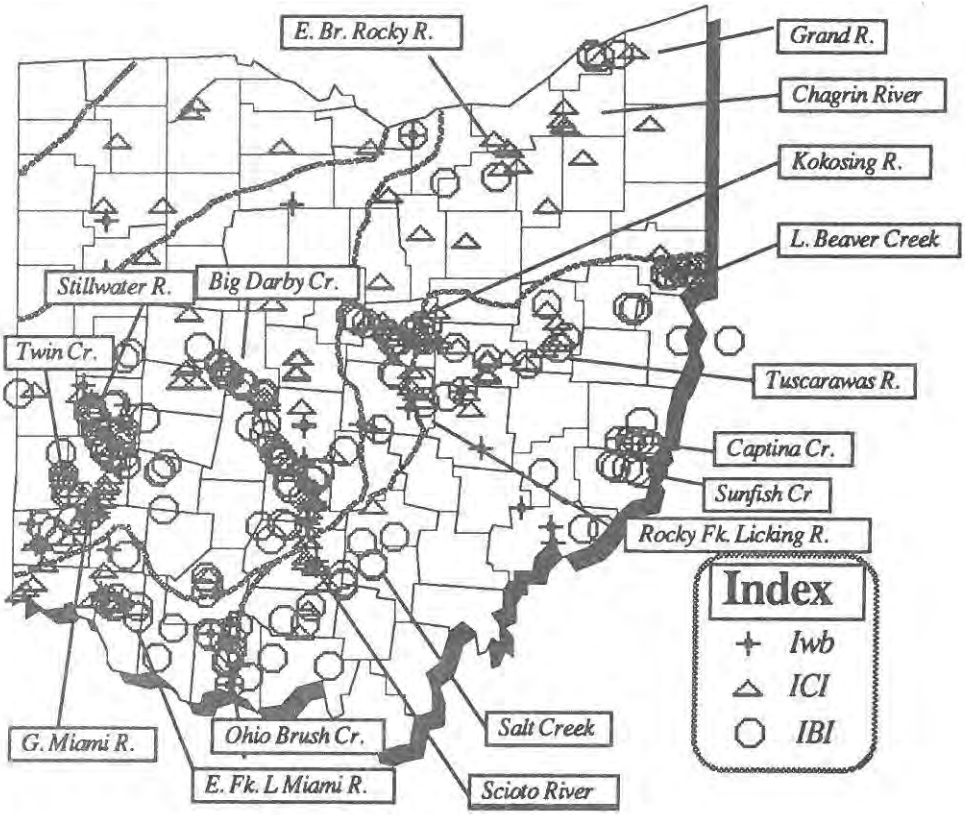


Figure 4-8 Location of biological communities with index scores in the "Exceptional" range of Ohio's biocriteria.

used to characterize different impacts.

With the large number of complex and exotic chemicals now used in many areas of our economy it will be increasingly important to identify toxic problem areas in our surface waters. We feel that an integrated approach that incorporates instream assessments of aquatic communities and whole effluent toxicity studies along with more traditional water quality and sediment chemistry measures is the most complete way currently available to characterize areas where toxic pollution may be a problem. More information on toxic problems is provided in Section 5.

Causes and Sources of Threatened Stream Segments

Over 400 miles of Ohio's rivers and streams are currently meeting their uses, but are classified as threatened. The threat is most serious for the EWH ("Exceptional Warmwater Habitat") aquatic life use. For EWH streams, 26.5% of miles meeting their uses are threatened compared to 9.7% for warmwater streams. The top three threats to segments currently attaining their aquatic life uses are organic enrichment/dissolved oxygen, siltation, and habitat modification. Much of the threat to streams currently meeting their uses originates from nonpoint sources that include agriculture, mining, habitat degradation, and urban encroachment and development. Streams with the EWH aquatic life use are especially susceptible to these impacts because they contain sensitive species assemblages that have little tolerance for these impacts. Figure 4-8 illustrates those sites in Ohio that have biological index scores in the exceptional range. Many of these streams are those whose aquatic life uses are threatened. Big Darby Creek, for example is threatened by urban, suburban, and agricultural development in its headwaters (see Volume V). Volume V illustrates trend information on Big Darby Creek and many of the threatened segments that are illustrated in Figure 4-8.

The definition of a "threatened" segment used in this analysis differs from that used in the Ohio Nonpoint Source Assessment. The Nonpoint assessment considers *every* segment currently meeting its use as threatened by nonpoint sources. The definition used in this inventory is more restrictive and is an informed estimate of an imminent danger, or where a clear trend suggests the use may not be met in the near future without some corrective or preemptive action. These segments are, in effect, where immediate attention is required.

Biological Response "Signatures"

The availability of a comprehensive, standardized ambient biological database from a variety of environmental settings has permitted certain patterns and characteristics of biological community response to be identified. A common criticism of ambient biological survey data has been of its inability to determine the cause or source of an impaired condition. While this is probably valid for some of the traditional diversity indices (*e.g.* $\bar{d}$, $\bar{H}$, etc.), number of species, biomass, and other *single dimension* indices, it does not apply equally to the "new" generation multi-metric indices such as the Index of Biotic Integrity (IBI) and Invertebrate Community Index (ICI). When the "response" patterns of the various metrics and components of these indices were examined from areas where

the predominant impairment causes and sources are well known, some consistent patterns emerged. Unique combinations of biological community characteristics that identify one impact type over others are referred to as "response signatures". These proved valuable in assigning causes and sources to the aquatic life use impairments analyzed in the 1990 305(b) report.

A database covering 25 similarly sized streams and rivers (drainage area range 90-450 sq. mi.) from the Eastern Corn Belt Plains (ECBP) and Huron/Erie Lake Plain (HELP) ecoregions was arranged. Sampling generally took place between 1982 and 1989 and followed Ohio EPA procedures. General impact types were assigned to each sampling site as follows:

1) **Complex Municipal/Industrial:** This includes impacts from the complex combination and interactions of major municipal WWTP and industrial point sources that comprise a *significant* fraction of the summer base flow of the receiving stream and where *one or more* of the following have occurred - serious instream chemical water quality impairments, recurrent effluent toxicity, spills that cause fish kills, severe sediment contamination. This may include areas that have combined sewer overflows and/or urban areas upstream from the point sources.

2) **Conventional Municipal/Industrial:** This includes impacts from municipal WWTPs that discharge conventional substances *and* where no serious or recurrent effluent toxicity is evident (these may or may not dominate stream flows) *or* small industrial discharges that may be toxic, but which do not comprise a significant fraction of the summer base flows; other influences such as CSOs and urban runoff may be present upstream.

3) **Combined Sewer Overflows/Urban:** Included are impacts from CSOs and urban runoff within cities and metropolitan areas that are in direct proximity to sampling sites. This includes both free-flowing and impounded areas upstream from the major WWTP discharges. Minor point sources may also be present in some areas.

4) **Channelization:** Areas impacted by extensive, large-scale channel modification projects and where little or no habitat recovery has taken place comprise this impact type. Some minor point source influences may be present.

5) **Agricultural Nonpoint:** This includes areas that are principally impacted by runoff from row crop agriculture which is the predominant land use in the ECBP and HELP ecoregions. Some minor point source and localized habitat influences may be present.

6) **Other:** Includes impacts not mentioned above - quarries, sand and gravel excavation, sanitary landfills, flow alterations (*i.e.* immediate tailwater areas).

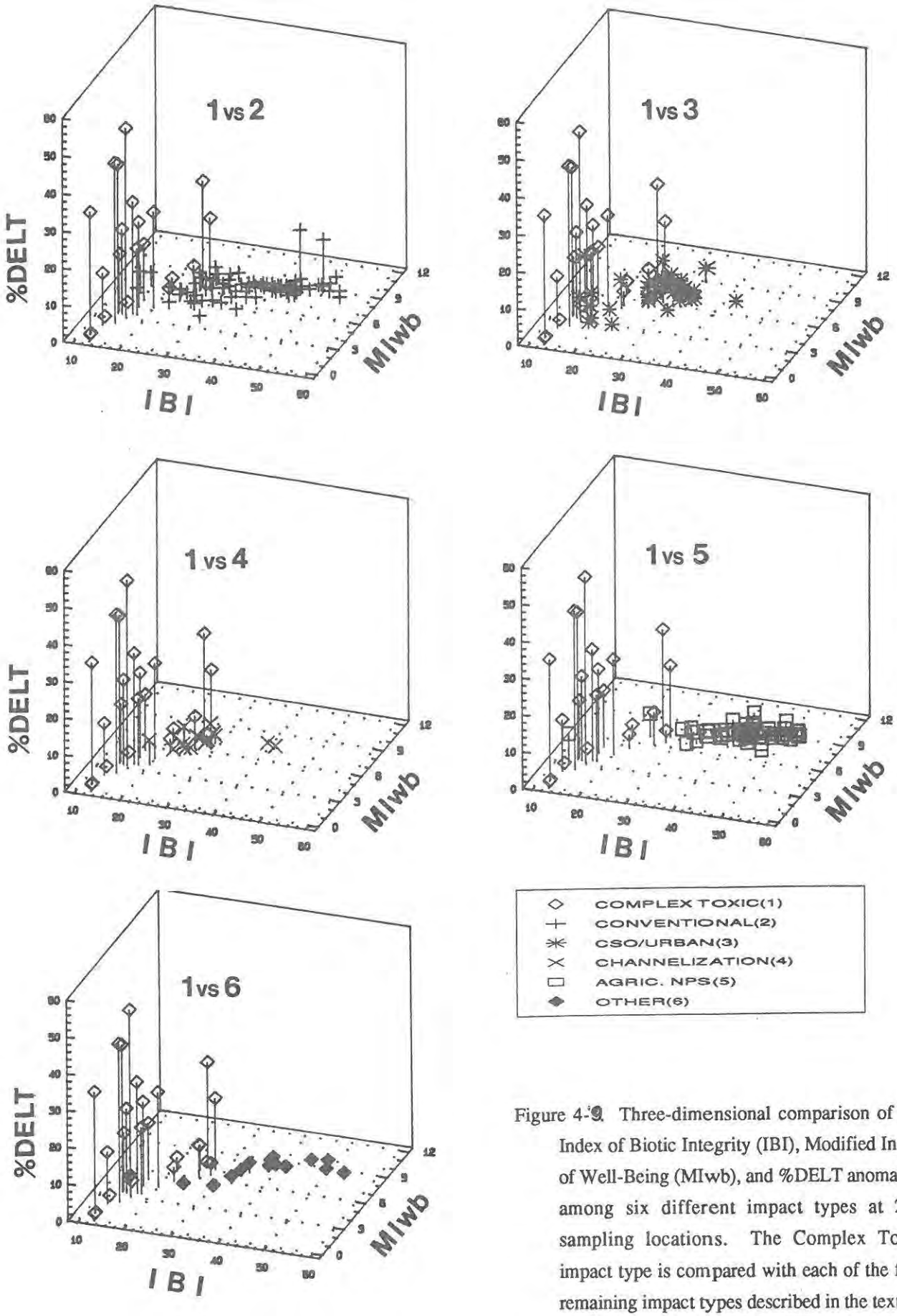


Figure 4-9. Three-dimensional comparison of the Index of Biotic Integrity (IBI), Modified Index of Well-Being (MIwb), and %DELT anomalies among six different impact types at 225 sampling locations. The Complex Toxic impact type is compared with each of the five remaining impact types described in the text.

One of these impact types was assigned to each of 225 sites sampled for fish and 111 sites sampled for macroinvertebrates. Assignments were based on the ***predominant*** impact that was directly influencing the site at the time the sampling took place. The assignments were based on the site specific knowledge of the study area gained by Ohio EPA while conducting biological surveys of the 25 streams and rivers. The spatial overlap between the different impact types throughout this database is somewhat variable. However, the key objective of this analysis is to determine whether or not the feedback from the biological community can communicate about and characterize these differences.

Some preliminary results of this ongoing project are provided in Figure 4-9 and Table 4-3. Our work thus far has concentrated on two and three dimensional analyses of IBI, MIwb, and ICI metrics and subcomponents. Analysis of "smaller" community components (*e.g.* species level) is being considered. An example of one such analysis is portrayed in Figure 4-9. Three components of the fish community are included in a three-dimensional plot that illustrates the concept behind examining the combinant biological response characteristics of each impact type. The IBI, MIwb, and the frequency (%) of deformities, eroded fins, lesions, and tumors (DELT) on individual fish are different expressions of the relative health of the fish community at a given location. The **Complex Toxic** impact type was compared on a three dimensional basis to each of the five other impact types. In each comparison the **Complex Toxic** impact exhibited a pattern separate from the other impact types. The amount of overlap was least with the **Agricultural Nonpoint Source** type and most with the **CSO/Urban** impact type. The response characteristics of the **Complex Toxic** impact type generally includes an IBI less than 20-25, MIwb less than 5.0-6.0, and DELT anomalies greater than 5-10%. While other impact types may have one or two of these characteristics in common, very seldom do they have all three.

Some of the **CSO/Urban** impacted sites overlapped into the complex type cluster in terms of the IBI and MIwb, but much less so in terms of %DELT. Some of these sites are in areas with significant industrial sources discharging into the municipal sewer system which may have "mimicked" the **Complex Toxic** impact type. This highlights the need to rely more on the biotic response signature to characterize an environmental impact rather than the traditional process of cultural impact characterization based on chemical, physical, and process characteristics alone.

Table 4-3 gives the distribution of fish community index scores by impact type for the five narrative performance classes (Ohio EPA 1987b). Sampling sites predominantly affected by the **Complex Toxic** impact type were most frequently in the ***Very Poor*** (55%) performance category followed by the **CSO/Urban** impact type (23%). The highest narrative category reached by **Complex Toxic** impacted sites was ***Fair*** (18%). It should be noted that the ***Fair*** sites in this impact category were the farthest downstream from the major sources and represent the initial recovery along the longitudinal profile. The **Conventional** impact type had 0 sites in the ***Very Poor*** range and along with the **Agricultural NPS** and **Other** impact types, were the only types to have sites which attained the ***Exceptional*** performance level (equivalent to the EWH use). These three impact types also had

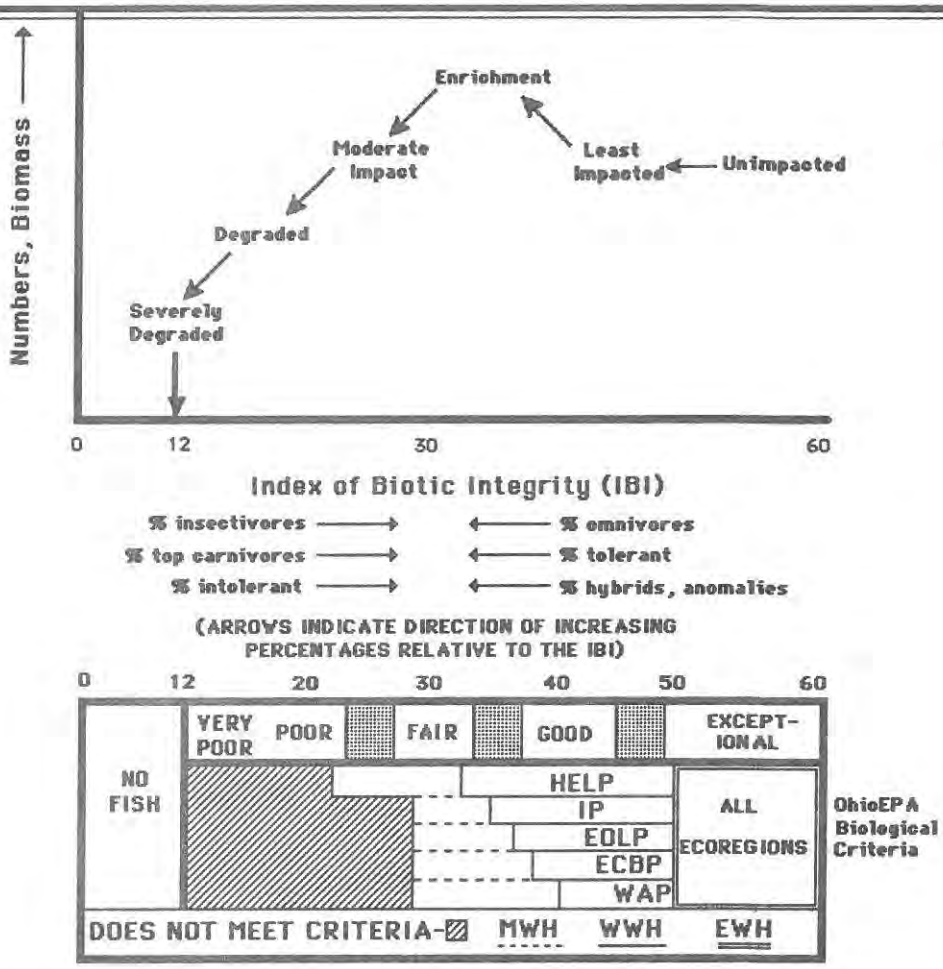
the highest number of sites in the ***Good*** performance level (equivalent to the WWH use). The **CSO/ Urban** and **Channelization** impact types, along with the **Complex Toxic** type, had no sites attaining the ***Good*** or ***Exceptional*** performance levels.

Although the **Complex Toxic** impact type also separates well from the other impact types in this analysis, a great deal of overlap exists between the other five types. For example, the statistics in Table 4-3 are similar for the **Conventional** and **Agricultural NPS** impact types. This is not surprising since the chemical and physical manifestations of each are functionally similar in the aquatic environment. Nevertheless some differences do exist and are likely discernable by using analyses more complex and iterative than those demonstrated in Figure 4-9 and Table 4-3. Ohio EPA is currently evaluating techniques by which some of these more subtle differences might be defined using biological response signatures.

Another way to describe the attributes of ambient biological data for characterizing different types of environmental impacts is with a conceptual model. Figure 4-10 shows a model of the response of a fish community to increasing stress from least impacted to severely degraded. The comparison of numbers and/or biomass with the IBI shows this conceptual relationship.

Table 4-3. Distribution of 225 sampling sites between the five narrative biological performance categories for the Index of Biotic Integrity (IBI) and Modified Index of Well-Being (MIwb) for six major impact types.

IMPACT TYPE	VERY POOR	POOR	FAIR	GOOD	EXCEPT-IONAL
1 Complex Toxic	55% (n=12)	27% (n=6)	18% (n=4)	0	0
2 Conventional Muni./Ind.	0	13% (n=10)	44% (n=35)	34% (n=27)	9% (n=7)
3 CSO/ Urban	23% (n=9)	10% (n=4)	67% (n=27)	0	0
4 Channeliz-ation	7% (n=1)	33% (n=5)	60% (n=9)	0	0
5 Agricultur-al NPS	2% (n=1)	2% (n=1)	29% (n=15)	52% (n=27)	15% (n=8)
6 Other	6% (n=1)	18% (n=3)	23% (n=4)	47% (n=8)	6% (n=1)



Conceptual Model of Community Response - Narrative Descriptions

Attributes	Severely Degraded (*Very Poor*)	Degraded (*Poor*)	Moderate Impact (*Fair*)	Enrichment (*Good*)	Least Impacted (*Exceptional*)
1) Community Condition Characteristics	No community organization - few or no species very low numbers only most tolerant, high % anomalies	Poorly organized community - few species, low numbers, tolerant species only, many anomalies	Reorganized community - tolerant species, intolerants in v. low numbers, omnivores predominate	Good community organization - good numbers of sensitive species, some intolerants	Highly organized community - insectivores, top carnivores, intolerants predominate, high diversity
2) Chemical Conditions	Acutely toxic chemical conditions *and/or*	Low D.O. with chronic toxicity *and/or*	Low D.O., nutrient enriched, no recurrent toxicity	Adequate D.O., no acute/chronic effects, elevated nutrients	No effects evident, background conditions, good D.O.
3) Physical Conditions	Total habitat loss, extremely contaminated sediments	Severe habitat degradation, severe sediment contamination	Modified stream channel, heavy siltation, canopy removal	Good habitat, no significant channel modifications	Excellent habitat, no modifications evident
4) Examples of Perturbations	Toxic discharges, dessication, acid mine drainage, severe thermal conditions	Municipal and industrial discharges, intermittent acute impacts	Municipal sewage, combined sewers, heavy agricultural use, non-acid mine drainage, moderate thermal increases	Minor sewage inputs, most agricultural non-point affected areas	No perturbations evident

Figure 4-10. Conceptual model of the response of the fish community as portrayed by the Index of Biotic Integrity and other community metrics with narrative descriptions of impact types and corresponding narrative biological performance expectations.

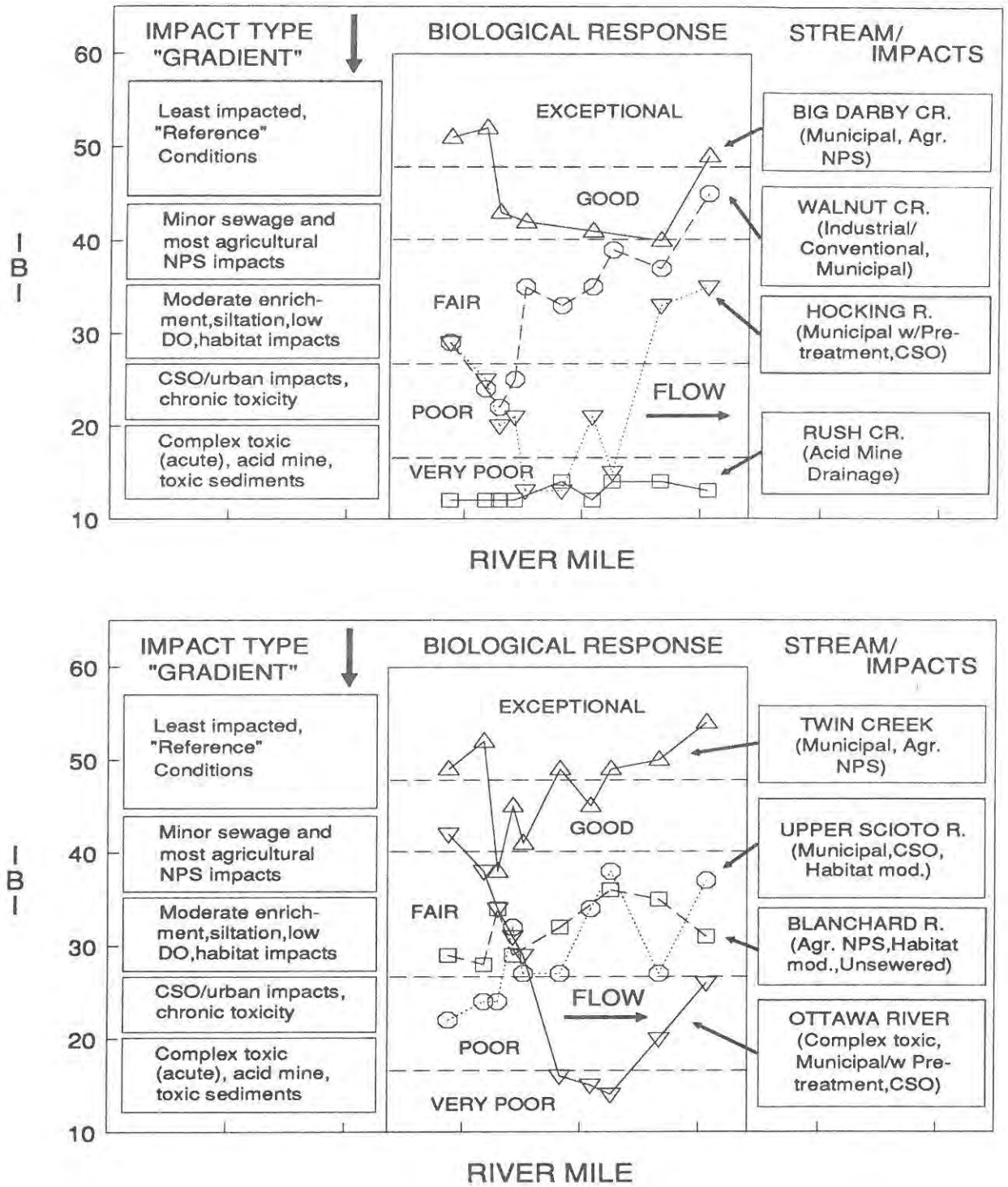


Figure 4-11. Biological response portrayed by the longitudinal trend of the IBI in eight similarly sized Ohio rivers with different types of point and nonpoint source impacts. Conceptual models of the impact are also included (left side: Impact Type "Gradient").

Beneath the graphic are narrative descriptions of biological community characteristics, chemical conditions, physical conditions, and examples of environmental perturbations that are typical of biological community response across the five narrative performance classes. These are necessarily general and are not invariable. This model was developed from a base of experience of analyzing biological, chemical, and physical data over a 10 year period and on a statewide basis. Thus the model has a good foundation in the observation of actual environmental conditions and associated biological community responses.

Following the format of the conceptual model the longitudinal results of the IBI from eight similarly sized streams and rivers from across the state were plotted together in two graphs (Fig. 4-11). These results demonstrate the utility of using the vertical scale of the IBI (or ICI, MIwb, etc.) to differentiate between different types of impacts. The left column of each graph lists the typical environmental impacts associated with a declining IBI, again based on our statewide base of experience. The actual IBI results are simultaneously plotted for four different streams in each graph and the predominant impact types in each study area are listed in the right column. Riverine biological communities may experience spatially different impacts on a longitudinal upstream/ downstream basis with the degree of departure and recovery dependent on the severity *and* type(s) of impacts being exerted on the biota. Again, the point being made here is that the biota itself is more accurate in defining which environmental impacts are important than we are from a cultural, surrogate, or process characterization perspective. Also, the predominant impacts in a particular segment may change with time and pollution abatement. A predominantly toxic impact may change to a conventional impact when the sources of toxicity are controlled. Often times impacts are "layered" in rivers with the less severe impact types being masked by those that cause the more serious degradation. This again points to the need to have biological monitoring as a feedback mechanism in water resource management.

Lakes/Reservoirs/Ponds

Relative assessments of the sources and causes of non-support of aquatic lifeuses in Ohio's assessed publicly owned lakes, reservoirs, and ponds are tabulated in Tables 4-4 and 4-5. Major and moderate sources of non-support are primarily nonpoint in origin and affect over 22,000 acres of assessed lake acreage. Agricultural nonpoint sources are by far having the greatest influence with major and moderateeffects on over 11,000 acres of lakes. Other nonpoint sources with moderate impacts and the lake acreage affected include urban runoff (7,978 acres) and septic tanks (6,624) acres. All categories of point sources have moderate impacts on over 9,000 acres of Ohio's assessed lakes. Causes of non-support in Ohio lakes are primarily of moderate magnitude and correlate well with the most prevalent sources (agricultual, urban, and septictank nonpoint). Non-support caused by elevated nutrients, excessive siltation, and organic enrichment affect 1,360 acres, 10,758 acres, and 8,543 acres, respectively. Over 4300 acres are impaired by metals in concentrations exceeding Ohio Water Quality Standards. Evaluations of causes and sources of non-support of beneficial uses encompasses fewer lakes than reported in the 1988 305(b) report. The 1988 assessments utilized responses to theNonpoint Source Survey Questionaire (Ohio EPA 1990) in addition to available monitored data. The 1990 assessments excluded the Nonpoint Source Survey Questionaire responses, which were regarded as too general, but included the more detailed responses to available 1989 Lake Water Quality Assessment survey questionaires. The final result was a lower number of lakes assessed in 1990 for causes and sources of impairment or Clean Water goal achievement compared to the 1988 305(b) report.

Table 4-4. Relative assessment of causes of impacts (i.e., acres[1]) causing non-support of all beneficial uses in Ohio lakes, reservoirs, and ponds.

Causes	High Magnitude	Moderate Magnitude	Slight Magnitude
Habitat modification	-	-	-
Ammonia	-	-	-
Siltation	626	10,132	-
Organic enrich./DO	1,389	7,154	-
Metals	127	4,252	-
Pesticides	604	868	3,590
Unknown toxicity	-	-	3,590
Priority organics	-	-	3,590
Nonpriority organics	-	-	-
Chlorine	-	-	-
Other inorganics	-	-	-
Nutrients	1,389	9,971	-
pH	83	-	-
Flow Alteration	-	3,590	-
Pathogens	-	626	-
Radiation	-	-	-
Oil and grease	-	3,590	-

[1] Acres counted add to more than total acres because more than one cause can be high, moderate, or minor in any given lake.

Table 4-5. Relative assessment of sources of impacts (i.e., acres[1]) causing non-support of aquatic life uses in Ohio lakes, reservoirs, and ponds .

Sources	Acres - All Impacts		
	Major	Moderate	Minor
I. Point Sources	—	**9,020**	—
Industrial Sources	—	5,152	—
Municipal Sources	—	5,998	—
Combined Sewer Overflows	—	3,000	—
Stormwater Sewers	—	5,130	—
II. Nonpoint Sources (Agric.)	**1,389**	**9,803**	—
General Agriculture	*1,389*	*8,395*	—
Livestock/feedlots	*604*	*1,651*	—
Crop Production	—	*3,785*	—
Pasture	—	*2,110*	—
Feedlots	*1,389*	*1,325*	—
Animal Holding Areas	*604*	—	—
III. Other Nonpoint	**3,717**	**7,826**	
Silviculture	—	434	—
Construction	—	127	—
Urban Runoff	—	7,978	—
Mining	254	63	—
Landfills	3,590	83	—
Septic Tanks	—	6,624	—
Hazardous Waste	3,590	—	—
Oil/Gas Well Sites	—	1,540	—
IV. Habitat Modifications	—	**5,241**	**604**
Hydro/habitat mod.	—	5,240	604
V. Other	—	**4,480**	
Spills	—	3590	—
In-place Pollutants	—	4480	—

[1]Acres counted add to more than total acres because more than one cause can be high, moderate, or minor in a lake.

Lake Erie Nearshore and Harbors

Unlike many of the river segments that have been assessed, direct effects of point source discharges on Lake Erie harbors and nearshore areas are complicated by lake effect, hydrology and dilution. Exceedances of water quality standards can be the result of a complex combination of local point sources, nonpoint sources, tributary loadings, pollutant export from upstream areas, and background conditions. The most recent data available for the nearshore area is from the 1978-1979 Lake Erie Intensive Study, and the bulk of this assessment is based on that data.

Although phosphorus loadings and open lake phosphorus concentrations have been decreasing, Lake Erie is still eutrophic, particularly throughout the western basin and in the nearshore area. The nearshore at the eastern end of the Ohio shoreline is the only area approaching or attaining mesotrophic status. Maumee Bay and Sandusky Bay are the most eutrophic areas in Lake Erie. Both of these bays are fed by rivers whose drainage basins are used intensively for agriculture. Although

nutrient levels are elevated throughout the nearshore and particularly near river mouths, water quality standards are rarely exceeded.

Table 4-6. Relative assessment of causes of impacts (i.e., shoreline miles[1]) causing non-support of aquatic life uses in Lake Erie.

Causes	Major Impacts	Moderate Impacts	Minor Impacts
EWH			
Habitat modification	-	-	-
Ammonia	-	-	-
Nitrite	-	-	-
Siltation	-	-	-
Organic enrich./DO	-	46	
Metals	86	119	10
Pesticides	-	-	-
Unknown toxicity	-	-	-
Priority organics	4	53	133
Nonpriority organics	-	-	-
Chlorine	-	-	-
Other inorganics	-	-	-
Nutrients	-	-	4
pH	-	31	4
Flow Alteration	-	-	-
Pathogens	-	-	-
Radiation	-	-	-
Oil and grease	-	-	-
Unknown cause	-	-	-

[1] Miles counted add to more than total miles because more than one cause can be of high, moderate, or minor magnitude in a segment .

Violations of Ohio water quality standards for metals are common throughout the nearshore area, particularly for cadmium and copper. Metals exceedances are the primary reason that the Lake Erie nearshore is classified as only partially supporting its designated uses (Table 4-6). The sources of metals are not known at this time.

Fish tissue analysis has revealed concentrations of total PCB in excess of FDA action levels. This information has led to the issuance of a whole lake fish consumption advisory for channel catfish and carp. More restrictive fish consumption advisories are in effect in the lower Black and Ashtabula Rivers due to elevated concentrations of PAH and chlorinated PCB compounds, respectively (See Table 5-3). Although Lake Erie supports the most productive fishery in the Great Lakes, the issuance of the consumption advisory classifies the whole lake as not supporting the CWA fishable goal.

The Lake Erie harbor areas are much more eutrophic and contain higher levels of contaminants than any of the nearshore areas. The harbors act as a natural sink for much of the sediments and associated pollutants delivered by the tributaries. Most of the harbors contain sediments that must be disposed of in confined areas when removed during routine maintenance dredging. The Ohio EPA hopes to develop biological criteria for the Lake Erie estuary areas. Presently Ohio's biocriteria do not cover the Lake Erie estuary area. Preliminary results (Thoma, in preparation) illustrate the impacts to these river mouths related to industry, municipal discharges, CSOs, urban runoff and habitat modification (Figure 4-12). Most of the wetland areas of Lake Erie that historically provided spawning and nursery habitat for many of Lake Erie species have been dredged and filled; this no doubt contributes to the susceptibility of these nearshore areas to impacts. Four areas; the, Cuyahoga, lower Maumee, Ashtabula, and Black Rivers have been designated as IJC Areas of Concern (AoC), and development of remedial action plans (RAPS) to return these areas to total beneficial uses are underway.

Table 4-7. Relative assessment of sources of impacts (i.e., shoreline miles[1]) causing non-support of aquatic life uses in Lake Erie. Major, moderate, and minor impacts refer to the high, moderate, and slight magnitude code of the U.S. EPA guidance for the 305(b) report.

Sources	Major Impacts	Moderate Impacts	Minor Impacts
I. Point Sources	24	281	8.1
II. Nonpoint Sources	46	40	—
V. In-place contaminants	—	15	18
VII. Land Disposal	20	4	—
VIII. Other	—	15	15

[1] Miles counted > than total miles because more than one source can be major, moderate, or minor in a segment.

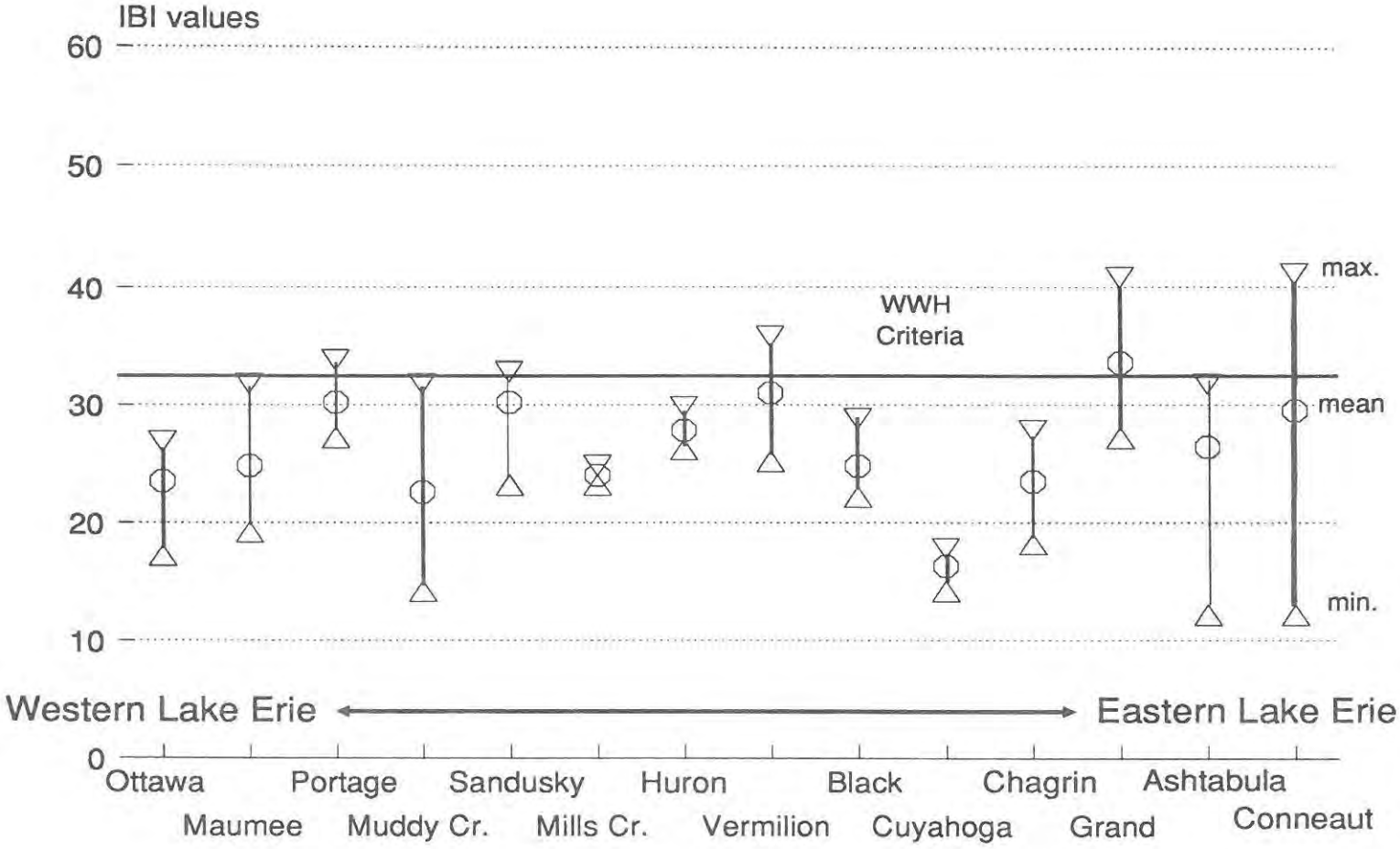


Figure 4-12. IBI scores (mean, minimum, and maximum) from 13 estuary areas of Lake Erie. Data is presented from west (left) to east (right).

SECTION 5

Public Health/Aquatic Life Concerns

Toxics Concerns

River miles, shoreline miles, and acres not meeting aquatic life uses because of toxic substances are summarized in Table 5-1. Metals are the single largest cause of non-attainment due to toxic substances in Ohio. The relative causes of non-attainment in Ohio are illustrated in Figure 5-1; toxic causes are emphasized by separating them from the remaining causes of impairment. Metals make up the largest proportion of the toxic pollutants on this pie chart the same as they did in 1988. Individual waterbodies impaired by toxics (high and moderate magnitude causes) are listed with the specific causes of impairment in the "Medium" list of impaired waters (Appendix B). Many of the rivers and streams impaired by toxics are located near the larger cities and industrialized areas of Ohio. Figure 4-6 presents a map of areas with highly elevated and extremely elevated metals concentrations in sediments. The pattern reflects areas of Ohio associated with heavy industry (steel, refineries, glass works). Areas of the states and large cities that do not have heavy industry have fewer locations with elevated sediment concentrations. Each of the the waterbodies with elevated levels of metals in sediments in Ohio are listed in Appendix D.

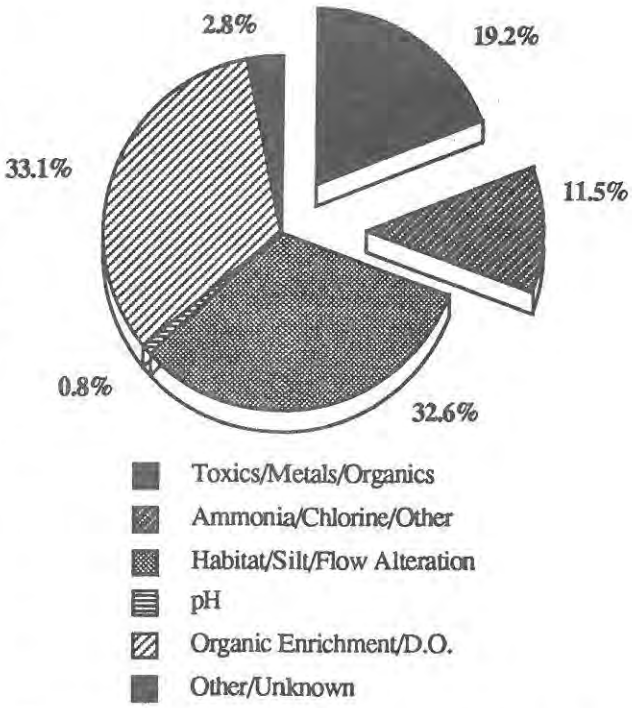


Figure 5-1.Causes of partial and non-attainment of aquatic life uses with toxic causes separated for emphasis.

Table 5-1. Miles of stream monitored for and impaired by toxics (by aquatic life use support) in Ohio rivers and streams.

Miles	EWH	WWH	MWH	CWH	LRW	LWH	Total
Monitored for Toxics	1075.7	4420.6	57.2	121.2	236.4	189.0	6100.0
Impaired by Toxics	167.6	1706.9	7.3	10.3	127.3	50.7	2070.1

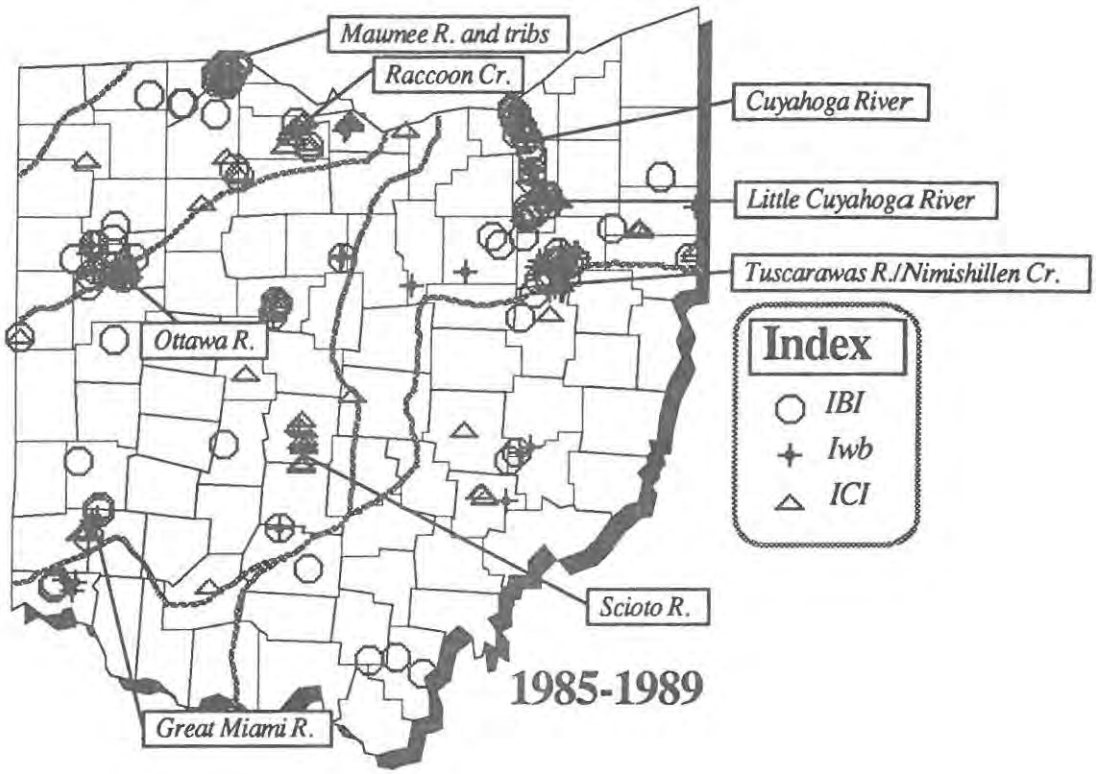


Figure 5-2. Biosurvey locations where the IBI, ICI, or MIwb performed in the poor-very poor range.

Typical effects of toxic impairment include poor to very poor biological performance, contaminated fish flesh, and contaminated sediments. Figure 5-2 illustrates the biosurvey sampling locations where the biota performed in the very poor or poor range of Ohio's biocriteria from 1985-1989. The major rivers on this map include the Cuyahoga River, lower Maumee River, Tuscarawas River, Nimishillen Creek, Ottawa River, Great Miami River and Scioto River. Fortunately the trends in most of these rivers are of improving aquatic life. Each of these rivers have shown modest to extensive improvement since the early 1980s, but most still show significant use impairment, some of which is still quite severe. Volume V presents more detailed evaluations of each river.

One of the concerns in addition to the impacts on aquatic life are the possible risks to human health. One likely pathway is via fish consumption. A number of fish consumption advisories (as well as body contact advisories) have been issued in Ohio due to the discovery of contamination; these are summarized in Table 5-2. The assessment of fish tissue contamination by toxics in Ohio has been deficient with regard to geographic coverage and analytical capability. However, examination of the data that exists in electronic form for PCBs illustrates some of the problem areas where advisories have been issued. Figure 5-3 is a map of locations sampled between 1985 and 1989 where fish tissue concentration of PCBs were > 2 ppm. The

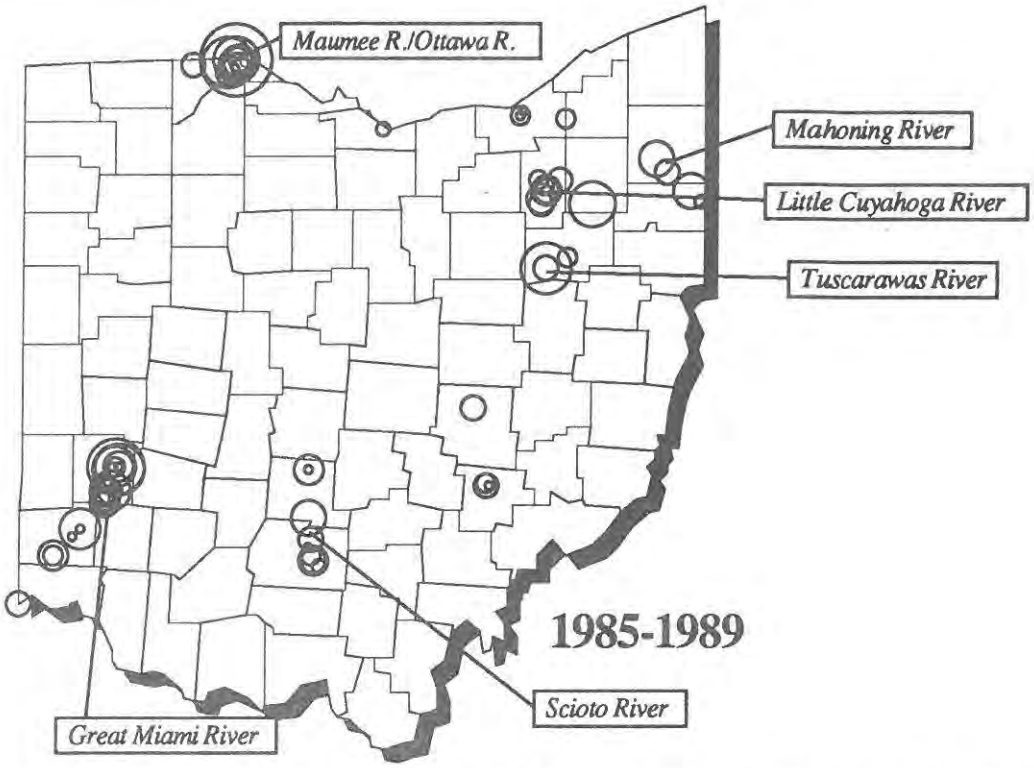


Figure 5-3. Locations of PCB concentrations > 2 ppm in fish tissue samples from Ohio. Point size increases with PCB concentration.

Table 5-2. Fish and primary contact advisories issued by state and local health departments for Ohio surface waters[1].

River or Lake (Advisory Date)	River Code	Location River Mile	Advisory Fish/Contact	Species	Pollutant
Lake Erie 01 Jan 87	25-001	All waters	+/–	Carp,Catfish	PCBs
Ottawa River[2] Oct 86	04-300	Immediately upstream and downstream from the Dura Avenue Landfill in Toledo, URM 5.7 to LRM 0.0	+/+	All Species	PCBs
Hecklinger Pond[2] - Toledo 08 Nov 89	04-002	All waters	+/–	All Species	PCBs
Black River 08 Aug 83	20-001	31st Street Bridge (Lorain) to harbor (includes Confined Disposal Facility) URM 6.2 to LRM 0.0	+/+	All Species	PAHs
Ashtabula River 03 Feb 83	07-001	24th Street Bridge to Ashtabula River (includes harbor area within breakwater) URM 2.3 to LRM 0.0	+/–	All Species	PCBs Hexachloroben-zene Pentachloroben-zene

Table 5-2. (continued)

River or Lake (Advisory Date)	River Code	Location River Mile	Advisory Fish/Contact	Species	Pollutant
Lake Nesmith /Akron - Aug 87	17-998	All waters	+/-	Carp/Catfish	Tetrachloroben-PCBs
Summit Lake /Akron - Aug 87	19-049	All waters	+/-	Carp/Catfish	PCBs
Portage Canal /Akron - Aug 87	19-049	All waters	+/-	Carp/Catfish	PCBs
Mahoning River 23 July 88	18-001	Northwest Bridge St. (Warren) to Pennsylvania Border URM 39.04 to LRM 9.8	+/+	All species	Sediment PAHs Phthalate esters + other chemicals in fish flesh
Middle Fork L. Beaver Creek 05 Oct 87	08-200	State Route Alt. 14 and Allen Road to State Route 11 south of Lisbon URM 39.1 to LRM 9.1	+/+	All species	Mirex Chlordane
Wolf Creek[2] 08 May 87	14-037	Gettysburg Avenue (Dayton) to Great Miami River, URM 3.2 to LRM 0.0	+/+	All species	PCBs
Great Miami R.[2] 08 May 87	14-001	Lowhead dam at Monument Avenue (Dayton) to DP&L Hutchings, URM 80.7 to LRM 64.6	+/–	All species	PCBs
Great Miami R. 19 Jan 87	14-001	Lowhead dam at Monument Avenue (Dayton) to Ohio River, URM 80.7 to LRM 0.0	+/–	Carp/Catfish Suckers	PCBs
Ford Hydraulic Canal (Hamilton) 08 Aug 83	14-099	Power Plant spillway to Great Miami R. URM 2.0 to LRM 0.0	+/–	All species	PCBs Organo-metalics
Scippo Creek 09 Jan 89	02-069	Kingston Pike to Scioto River URM 5.28 to LRM 0.0	+/–	All species	PCBs

[1] Abbreviations: URM = Upper River Mile, LRM = Lower River Mile, Fish = Fish consumption advisory, Contact = Primary contact advisory, + = Yes, – = No, PCBs = Polychlorinated biphenyls, PAHs = Polynuclear aromatic hydrocarbons.
[2] Advisory issued by local Health Department.

Fish Kill Information/Spills/Drinking Water Closures

Fish kills can be indicators of waterbodies with chronic spill problems. Streams that have infrequent kills, however, could be still be acutely impacted, but have a predominance of "tolerant" species. Appendix E lists major fish kills as reported by the Ohio Department of Natural Resources from 1987-1988. Like fish kills, areas of frequent spills may often identify areas with toxic problems. The 1988 report provides a summary of spills by county in Ohio from 1978 to 1987. Estenik and Clayton (1988) provide further detail on spills in Ohio. Table 5-3 lists reported drinking water closures related to spills from 1987 to 1989.

Table 5-3. Reported drinking water intake closures related to spill incidents in Ohio from 1987[1]–1989.

River	Date	Affected Cities	Pollutant Spilled
Ohio River	Jan 88	East Liverpool Steubenville Toronto	Fuel Oil Spill at Pittsburgh
Sandusky River	Feb 88	Fremont	Toluene Spill
Wills Creek	May 88	Cambridge	Raw Sewage Discharge
Little Hocking R.	Mar 89	Nelsonville	Oil Spill
Ohio River	July 89	Steubenville	Cyanide Spill at Weirton, WV

[1]No closures reported

In addition to the toxic impacts discussed above other types of pollution can also affect human health. Figure 5-4 illustrates highly elevated and extremely elevated fecal coliform bacteria counts in Ohio streams and river during 1984-1988. The same information is listed by waterbody in Appendix F. These impacts have direct affects on the recreational use of these waterbodies and indicate problems from improper treatment of sewage, runoff, and combined sewer overflows.

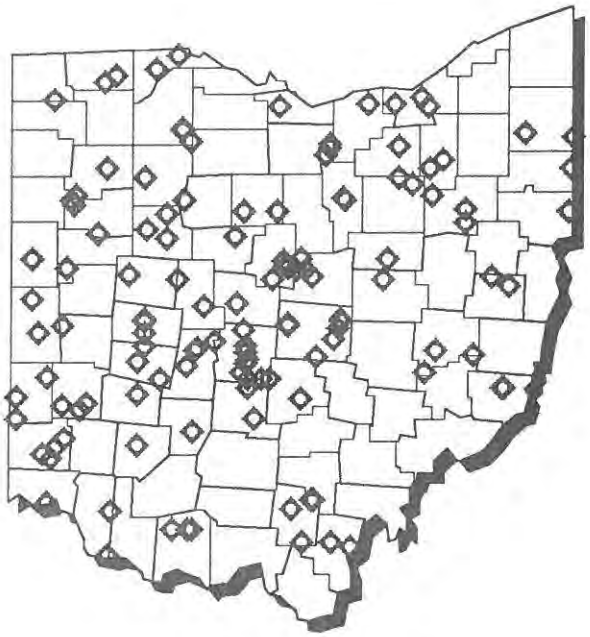


Figure 5-4. Locations of highly elevated and extremely elevated fecal coliform counts from streams and rivers in Ohio during 1985-1989.

Information on closures of public bathing beaches during the 1986-87 period is limited to Lake Erie and state park beaches as reported by the Ohio Department of Natural Resources and the Ohio Department of

Health. The only closure reported in 1986 was for Port Clinton on Lake Erie. Seven closures were reported statewide in 1987. Five of these were due to elevated levels of fecal coliform bacteria in excess of the bathing waters standard (200 ct./100 ml). Closures ranged from 3 to 16 days in length. The remaining two closures were due to high water conditions and were unrelated to exceedances of human body contact criteria. State park beach closings for 1989 are listed in Table 5-4. The time period of all these advisories occurred during periods of inordinate rainfall as well as a known discharge of agricultural waste into a tributary of Grand Lake St. Marys

Table 5-4. State park beaches posted for water quality advisories during 1989.

Beach	Dates	Cause
Alum Creek. north camp beach	Week of July 3	Fecal coliform count mean > 200 fc/100ml
Dillon Lake	mid-June to mid-July	Fecal coliform count mean > 200 fc/100ml
Grand Lake St. Marys	mid-July to late-July	Fecal coliform count mean > 200 fc/100ml

Table 5-5 . Beach closures as reported by the Department of Health (counties in parentheses) for 1988-89:

Beach	Dates	Mean Fecal coliform
	1988	
Avon Lake (Lorain)	August 11	327
	August 18	473
	August 25	624
Cedar Point (Erie)	August 29	237
Century Park (Lorain)	June 16	342
	June 23	405
	June 30	427
Edgewater State Park: (Cleveland)		
East Beach	August 11	288
	August 18	310
West Beach	July 21	226
	July 28	311
	August 1	316
	August 11	338
	August 18	272
Euclid Beach State Park (Cuyahoga)		
	June 23	279
	June 30	307
	August 25	286

Table 5-5 . (continued).

Beach	Dates	Mean Fecal coliform
Geneva State Park	August 22	256
(Ashtabula)	August 29	285
Huntington Reservation	June 23	212
(Cuyahoga)		
Lakeview Park	June 23	241
(Lorain)	June 30	500
Mosquito Lake State Park (Trumbull)		
North Beach	July 20	200
	August 11	312
	August 18	236
Sheffield Park	June 16	338
(Lorain)	June 23	292
	June 30	404
	July 21	255
	July 28	309
White City Beach[1]	June 16	367
(Cuyahoga)	June 23	297
	June 30	445
	July 5	312
	July 14	343
	July 21	430
	July 28	422
	August 1	272
	August 11	559
	August 18	540
	August 25	489
	September 1	461
	1989	
Lakeshore Park	June 22	230
(Ashtabula)		
Maumee Bay State Park (Lucas)		
	July 24	211
	July 31	267
	August 7	452
Port Clinton City Beach (Ottawa)		
	June 12	495
	June 19	585
	June 26	767
	July 5	303
	July 10	227
	August 7	223
	August 14	520
Vermilion Beach (Erie)		
	June 12	352
	June 19	728
	June 26	278
	July 5	242

[1]Not a designated beach; sampled only to monitor effect of adjacent WWTP on water quality.

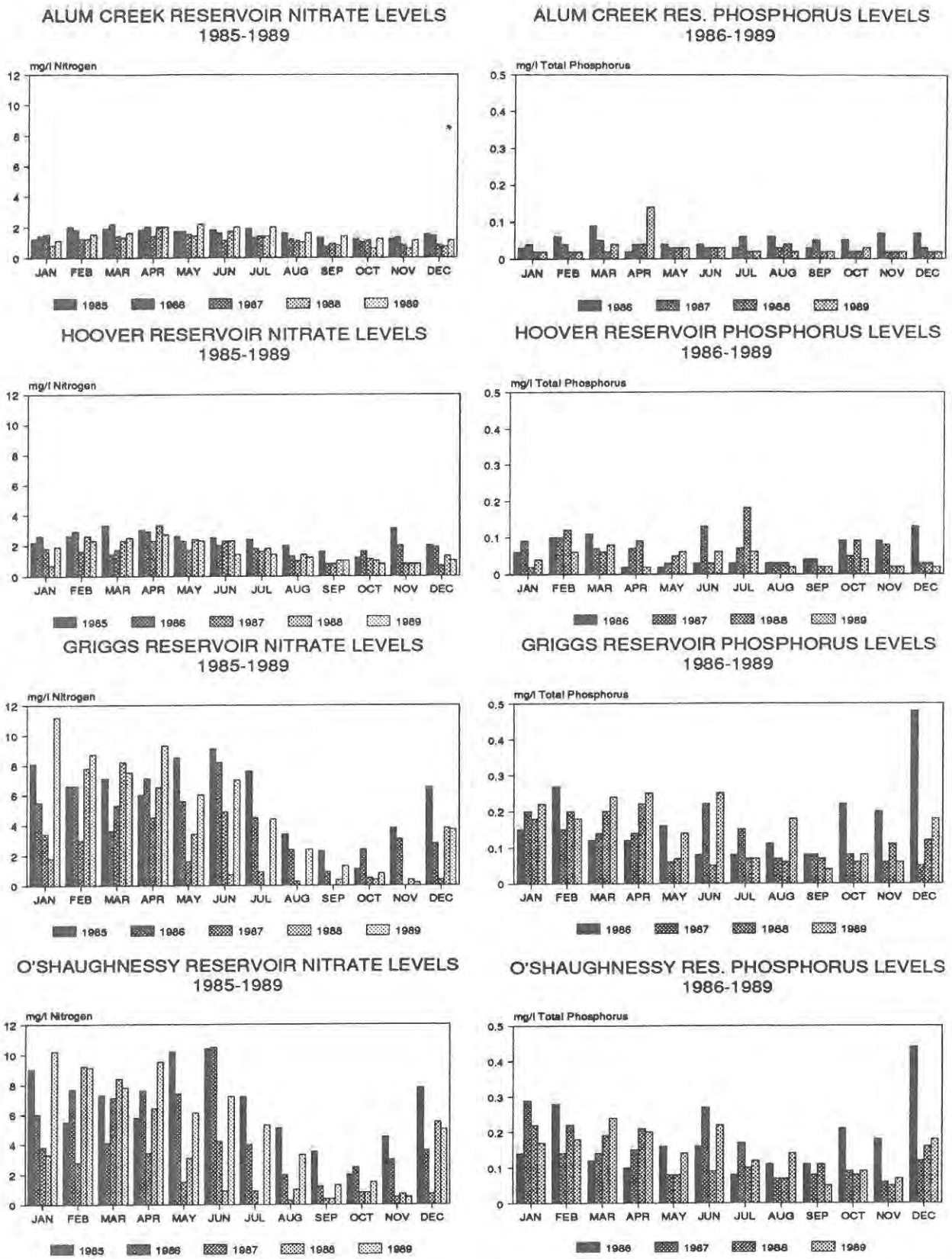


Figure 5-5. Monthly concentrations of nitrate-nitrogen (mg/l) and total phosphorus (mg/l) observed in four major water supply reservoirs serving the city of Columbus, 1985-1989 (data courtesy of the Columbus Division of Water, Water Quality Assurance Laboratory).

Public Water Supply Information

Information about toxic chemicals in municipal water supplies is treated in more detail in the Ohio Nonpoint Source Assessment (Ohio EPA 1990). Maximum contaminant level (MCL) concentrations of various substances were examined for finished water. Exceedances were noted for nitrates, turbidity, and bacteria. In addition the results of sampling surface water intakes for alochlor and metalochlor discovered detectable concentrations of one or both substances at 20 of 163 intakes.

Columbus Division of Water
Reservoir Monitoring, 1985-1989

The City of Columbus Division of Water is responsible for supplying drinking water to approximately 1 million persons in the greater metropolitan area. Two of its principal water treatment facilities utilize surface water. The Dublin Road plant withdraws water from the Scioto River and the Warren Cremean plant withdraws from Big Walnut Creek. Water supply reservoirs located on each stream ensure an adequate supply of raw water during dry weather periods. Griggs and O'Shaughnessy Reservoirs are located on the Scioto River and impound approximately 385 and 920 acres, respectively. Hoover Reservoir located on Big Walnut Creek impounds approximately 3000 acres and is supplemented by water from the Alum Creek Reservoir (3387 acres) located on Alum Creek (a tributary to Big Walnut Cr.).

Figure 5-5 shows the results of sampling conducted by the Water Quality Assurance Laboratory at each reservoir since 1985 for nitrate-nitrogen (NO_3-N) and total phosphorus (T-P). One obvious pattern is for the concentrations of both parameters to be markedly higher in the Scioto River reservoirs than either Hoover or Alum Creek. The concentrations of NO_3-N in the Scioto River are of particular interest because the 10 mg/l criterion for public water supplies is frequently approached and occasionally exceeded, particularly during the winter and spring months. The watershed drainage area upstream from the Griggs (1044 sq. mi.) and O'Shaughnessy (980 sq. mi.) reservoirs are much larger than the areas above Hoover (190 sq. mi.) and Alum Creek (140 sq. mi.). This in part explains the marked differences in the NO_3-N and Total P concentrations between the Scioto and Big Walnut systems. Both watersheds are predominated by agricultural row crop land use, with the upper Scioto River exhibiting some unusually high ambient concentrations of NO_3-N. One product of this land use type is an extensive subsurface tile drainage system which drains percolated surface runoff into the tributaries and mainstem of the upper Scioto River basin. Nitrate-N moves particularly well through such systems. For example, concentrations ranging from 20-50 mg/l were observed in the upper tributaries of the Bokes Creek subbasin (see District Surface Water Investigation Highlights).

Information of this type likely exists for other areas of the state, but is not readily available through electronic means (*e.g.* STORET). Given the potential for similar NO_3-N concentrations

to exist in other areas of the state this type of information seems particularly important for evaluating the quality of Ohio's raw surface water supplies.

Volatile Organic Compounds in Ground Water

Traces of man-made organic contaminants have been found in 12% of the ground water supplies providing drinking water to Ohio communities according to a five-year study by the Division of Public Drinking Water of the Ohio EPA. Concentrations of volatile organic compounds exceeded current health-based safety standards in 14 (1%) of 1,331 systems tested (Table 5-6). Trichloroethylene (TCE), detected in 51 water supplies, was the most commonly occurring industrial contaminant. U.S.EPA has linked exposure to volatile organic compounds with a variety of health problems. Volatile organic compounds can contaminate an aquifer as a result of accidental spills and leaks, improper storage and disposal, industrial discharges and runoff. Improper disposal of household wastes such as used motor oil and cleaning fluids can also contribute to the problem. Enforceable standards for eight volatile organic compounds became effective January 1, 1989. In addition, many public water supplies now must monitor for an additional 51 volatile organic compounds.

Table 5-6. Water systems where volatile organic compounds were detected in amounts exceeding "maximum contaminant levels".

Water Supply	Contaminant (PPB)	Status	
Ashland, Ashland Co.	TCE	17.3	Well out of service Fall/1985
Bradner, Wood Co.	TCE	16.0	Well out of service Jan/1985
Dayton-Ottawa Plant Montgomery Co.	TCE	5.3 23.3 12.7	Treatment to remove TCE
Glen Ridge Mobil Home Park Orrville, Wayne Co.	Vinyl Chloride	10.6	Second sample showed no contamination
Griffith Nursing Home Lexington, Richland Co.	TCE	8.0	Second sample showed no contamination
London, Madison Co	TCE	6.2 7.4 7.0	Recent samples showed no contamination
Milford, Clermont Co.	TCE	8.7	No longer a drinking water source
Mt. Vernon Bible College	TCE	7.0	Well out of service
New Philadelphia Tuscarawas Co.	TCE	8.7 5.4 30.0 17.5	Treatment to remove TCE

Table 5-6. (Continued)

Water Supply	Contaminant (PPB)	Status	
Newcomerstown	TCE	9.0 8.0 9.0	Recent samples showed no contamination, samples taken quarterly
Seven Mile, Butler Co, porary	TCE	28.7 52.9	City will treat water as tem- measure until a new water supply is located, a boil advisory remains in effect.
Wright-Patterson AFB and	TCE	8.3 10.5 5.5 15.1	Treatment to remove TCE other volatile organics
Zanesville, Muskingum Co.	TCE TCE TCE 1,1,1 trichloroethane	55.5 25.8 1906.0 715.0	Wells out of service

Section 6

Lakes Information

Ohio has identified 417 lakes that are considered publicly owned. Publicly owned lakes are defined as those lakes, ponds, or reservoirs, including upground reservoirs, which are 5 acres or greater in surface area and where public access to the water is owned by a public entity, or those lakes that are regulated by the Ohio EPA as a primary or secondary public drinking water supply. These lakes are further divided into a list of 305 significant public lakes which are freely open to the public for recreation. A detailed analysis of water quality data for Ohio's inland lakes is contained in Volume III (Davic 1990) which is attached to this report. Volume III inventories Ohio's publicly owned lakes as well as provides information on Ohio EPA's water quality assessment process,including an updated trophic classification of Ohio's lakes, an explanation of the use of evaluated and monitored data, a summary of current and historical lake monitoring in Ohio, lake pollution control procedures, and recommendations for future monitoring in Ohio. Also included are tables outlining designated use support in Ohio's lakes, an assessment of causes and sources of non-support, and an identification of lake acreage in non-support due to toxics.

In general, there is a lack of comprehensive monitored data for publicly owned lakes in Ohio. Historical lake monitoring on a statewide basis has been sporadic and generally tied to the availability of federal funds. Some early efforts included the National Eutrophication Survey

in the 1970s, the cooperative lake monitoring program between the Ohio EPA and the U.S. Geological Survey from 1975 to 1980, and a 1980-81 Clean Lakes Assessment grant awarded to Ohio EPA for lake classification and prioritization. Between 1981 and 1987, only a few lakes were sampled, mostly as part of comprehensive water quality surveys of major river basins. Beginning in 1987, three Clean Lakes Program funded Phase I Diagnostic and Feasibility studies, coordinated by the Ohio EPA, have been conducted or are ongoing in Ohio. Two studies have been completed and applications made for Phase II Implementation funds. These projects have been among the most comprehensive lake and watershed surveys conducted in the State, pooling resources from numerous local, state, and federal government agencies, lake consultants, and universities. Most recent statewide lake monitoring in Ohio involved the sampling of 27 lakes in 1989 with funding provided by a Section 314 Lake Water Quality Assessment grant awarded to the Ohio EPA. This grant will also fund sampling of an additional 24 lakes in 1990. Other recent lake monitoring activities in Ohio included a sedimentation survey of 47 lakes conducted in 1988 by the U.S. Soil Conservation Service and sampling of numerous lakes by a pilot volunteer monitoring network established in northeast Ohio in 1988. Data from these recent sources have resulted in the reassessment of 77 (18%) of Ohio's 417 publicly owned lakes.

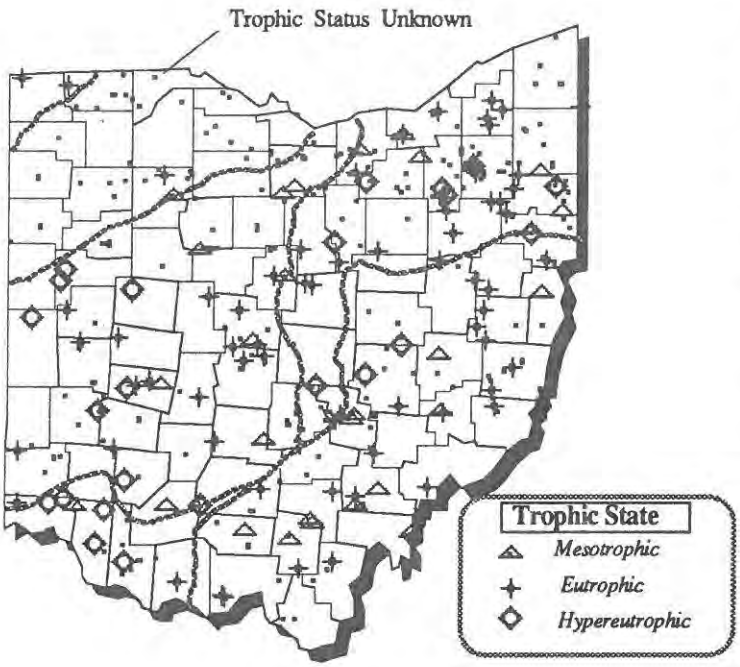


Figure 6-1. Trophic status of 143 Ohio lakes.

Based on these new data sources and the availability of older monitored and evaluated data, about 33% of Ohio's publicly owned lakes have been assessed for trophic condition, CWA goal achievement (fishable/swimmable), and use designation support (Exceptional Warmwater Habitat/Public Water Supply). Trophic analysis of 143 lakes using Carlson Trophic State Index (TSI) points indicated that most Ohio lakes are highly productive with 76% being either eutrophic or hypereutrophic. The remainder are classified as mesotrophic; there are no oligotrophic lakes in Ohio. Goal achievement and use support were determined using the Ohio Lake Condition Index (LCI), a multi-parameter index utilizing observations and/or measurements of numerous components of the lake resource (e.g.

Secchi disk depth, volume loss due to sedimentation, spring total phosphorus, nuisance growths of macrophytes, priority organics, priority metals, ect.). Specified combinations of the parameters are used to determine goal achievement or use support following guidelines described in Davic and DeShon (1989) and revised in Volume III of this report. Of the lakes with sufficient data for analysis, the vast majority were either partially supporting the goals/uses or were supporting them but threatened. The most significant problems causing excessive productivity and non-attainment of goals and uses in Ohio's lakes are volume loss due to sedimentation, nuisance growths of macrophytes, nutrient enrichment, and general aesthetic condition.

Efforts since 1988 by the Ohio EPA and other agencies to assess the overall condition of Ohio's lakes should be continued and expanded. Additional data are needed on volume loss due to sedimentation, fish tissue and sediment contamination, and overall health of the biological resource (e.g. thru development of biocriteria or assessment criteria for fish, plankton, macrophyte communities, etc.). Besides continuing to obtain Section 314 Phase I and II grants for intensive monitoring of specific lakes, a state funded inland lake monitoring program needs to be initiated to collect baseline and long-term chemical, physical, and biological data for all of Ohio's publicly owned lakes. More lakes need to be sampled more often to determine trends in resource condition. Resources directed to development of wetland monitoring procedures and assessment criteria should also be given a high priority. Finally, volunteer citizen monitoring programs should be expanded statewide and encouraged to become active in a wide variety of lake monitoring activities.

Section 7

Nonpoint Source Information

Ohio EPA Nonpoint Source Assessment

A comprehensive assessment of nonpoint sources and their impacts on water quality is contained in a separate report produced by Ohio EPA (1990). This was also submitted to U.S. EPA under separate cover by the Division of Water Quality Planning & Assessment in fulfillment of the requirements of Section 319 of the 1987 Water Quality Act.

Heidelberg Water Quality Laboratory Studies

A comprehensive evaluation of the chemical and physical characteristics of nonpoint runoff in selected stream and river basins of the Lake Erie drainage has been conducted by the Heidelberg Water Quality Laboratory since the early 1970's. A detailed analysis of the findings and conclusions of this effort are found in Lake Erie Agro-Ecosystem Program: Sediment, Nutrient, and Pesticide Export Studies (Baker 1987). The monitoring approach of this effort fills an important gap that has existed in the evaluation of Ohio surface water quality and represents a

model program for similar efforts elsewhere. The results of this program also reveal that there are significant potential and realized impacts to surface waters, particularly for non-aquatic life uses such as drinking water supplies, aesthetics, harbor maintenance (dredging), and various water quality concerns in Lake Erie. According to Baker (1987) the major nonpoint source pollutants observed in Lake Erie basin watersheds include sediment, nitrates, phosphorus, and a number of pesticides (primarily herbicides) several of which have export rates higher than national averages. Surface water uses that are impaired or threatened by these pollutants include surface drinking water supplies, wetlands, and aquatic life. Ohio EPA is currently implementing an expanded nonpoint assessment program which will include analysis of both chemical/ physical and biological responses in surface waters. The inclusion of biological evaluations partially addresses one of the recommendations of Baker (1987). A more detailed analysis of the information generated by these nonpoint studies is contained in the Ohio EPA Nonpoint Assessment (Ohio EPA 1990).

Section 8

Ground Water Quality

Ground Water Quality

Ground water quality monitoring activities for the 1988-1990 reporting period are described in Volume IV of this report. They are largely limited to activities carried out by the Ohio EPA Divisions of Ground Water, Public Drinking Water and other state agencies. Detailed summaries of compliance monitoring by regulated entities and monitoring by numerous local agencies and private institutions have not been compiled at this time, and will be reported on in 1992.

The ground water portions of this report include brief overviews of Ohio's ground water resources, major aquifer systems and general discussions of program activities carried out by the Ohio EPA and other state agencies. These are followed by a summary of Ohio's Ground Water Monitoring Strategy completed in 1988 and a discussion of the common ground water pollution sources.

Most of the monitoring components and needs identified in Ohio's Ground Water Protection and Management Strategy (completed in 1986) are well on their way to implementation. Of the 17 individual work tasks identified in the strategy 14 have either been completed or have been initiated. Ambient ground water monitoring and public drinking water monitoring have progressed the farthest in regard to strategy implementation. Ohio's 130 ambient monitoring stations include selected industrial and municipal production wells which represent all major aquifer systems in the state. Over the past two years, these stations have been sampled annually or semi-annually for a wide range or organic and inorganic parameters. A table of Ohio's ambient stations identified by major aquifers is included.

Ohio's public water systems from ground water sources likewise have undergone increased monitoring efforts during the past two years. Monitoring data have been collected as part of special water quality investigations and in compliance with new rules and requirements mandated by the Federal Safe Drinking Water Act and State legislation. In particular, water supply testing of public water systems has increased for radionuclides, pesticides, and volatile organics chemicals with approximately 300 to 400 systems tested annually for various regulated substances.

Pollution source monitoring carried out by the Division of Ground Water involves the sampling and analyses of off-site and on-site wells in close proximity to various land disposal and storage facilities such as landfills, wastewater facilities, land application sites and others. This program has been carried out at a moderate level compared to previous reporting periods. Most on-site monitoring wells at regulated facilities are tested by the facility as a condition of an operating or installation permit. Data collected by the Gound Water Division are limited largely to nearby water supply wells which may be susceptible to pollution impacts. Except at a few facilities, this program is not be conducted at a level where statistically significantly pollution impacts and trends can be clearly defined. It's principal objective is to identify public health threats in nearby drinking water supplies. Around 400 wells are tested annually as part of this program.

In the area of nonpoint source monitoring, Agency efforts are behind the milestones established in the various state strategic plans due to staffing limitations and other ground water activities with higher priority. Beginning in 1990, case studies and other nonpoint source monitoring will be increased substantially and will play a more prominent role in the Agency's overall ground water monitoring scheme.

Section 9

District Highlights

This section of the Water Resource Inventory highlights some investigations of Ohio EPA's district surface water units. Ohio EPA has five district offices: Columbus (CDO), Twinsburg (NEDO), Bowling Green (NWDO), Dayton (SWDO), and Logan (SEDO). They perform many of the monitoring activities that support the surface water programs and are the principal contact for many public complaints about surface water problems. What has been stated earlier is obvious here, that a broad and integrated monitoring approach is necessary to truly understand and solve water

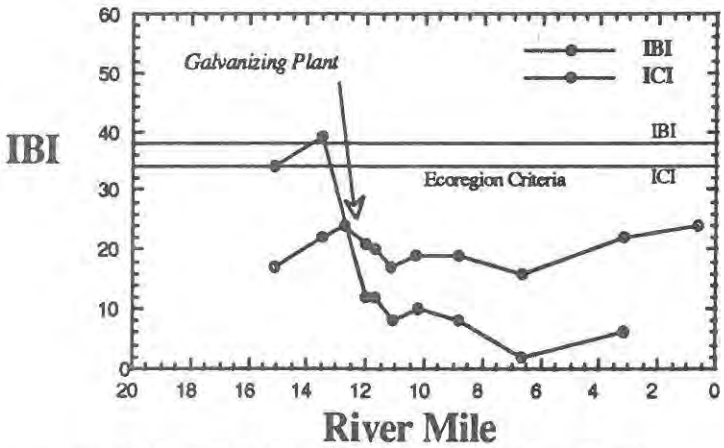


Figure 9-1. IBI and ICI scores for the West Branch and mainstem of Nimishillen Creek during July-September 1985.

resource problems throughout the state. The common thread running through these varied examples is the use of ambient monitoring data to identify and understand degradation in surface waters.

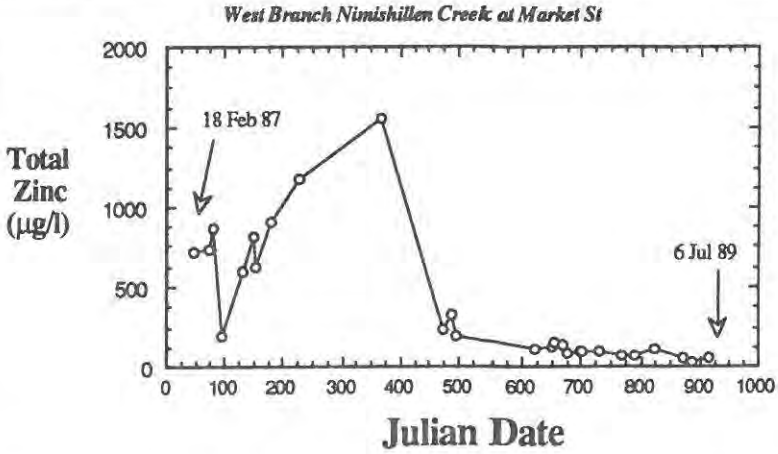


Figure 9-2. Total zinc concentrations in the West Branch Nimishillen Creek at Market Street from 18 Feb 87 to 6 Jul 89.

NEDO - *Control of an Unpermitted Discharge*

As a result of biological and chemical monitoring of Nimishillen Creek in 1985 and 1986, Gregory Galvanizing was found to be discharging wastewater to the West Branch of Nimishillen Creek without a permit. This discharge caused a severe impairment to the fish and macroinvertebrate communities for greater than twelve miles of stream (Figure 9-1). The discharges, with zinc being the main parameter of concern, consisted of seeps to the city storm sewer system and directly into the creek.

On June 29, 1987 Ohio EPA conducted a site inspection of the Gregory Galvanizing property and found the main sources of contamination by collecting numerous water quality samples. The company agreed to correct the problem areas and the Ohio EPA documented improvements to the West Branch Nimishillen Creek by collecting monthly samples upstream and downstream of the facility (Figure 9-2). By August 1988, zinc violations in the stream were eliminated. A follow-up minisurvey of the biota is planned for summer 1990 to see if there has been a corresponding improvement in the biological community.

SEDO - *An Assessment of Mine Impacts in the Meigs Creek Basin*

Meigs Creek, in Morgan County. Ohio, is a medium sized stream 21 miles long with a drainage area of 142 sq mi. It empties into the Muskingum River at River Mile 29.42. Six sites were sampled within the Meigs Creek basin on September 21 and November 2, 1989. The intent of this mini-survey was to evaluate water quality and biological quality of the Meigs Creek basin, particularly lower Meigs Creek and Dyes Fork. An assessment was also made of Central Ohio Coal's preparation plant discharge to lower Dyes Fork. Olive Green Creek, another tributary to the Muskingum River just

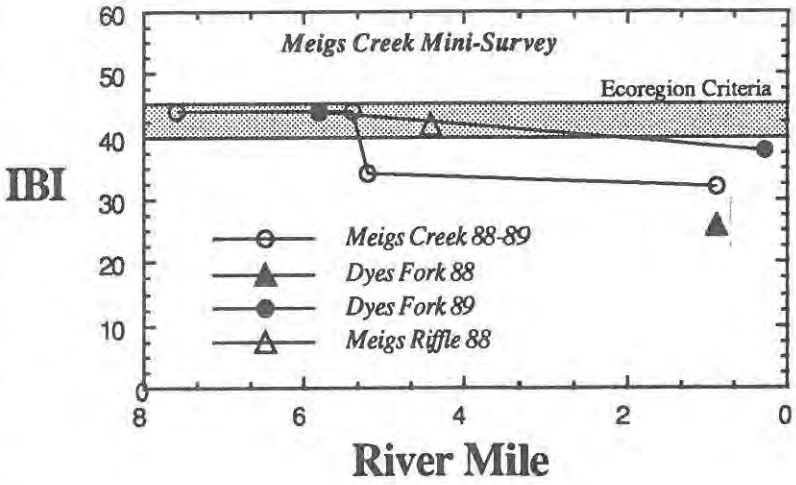


Figure 9-3. IBI scores from Meigs Creek and Dyes Fork during 1988 and 1989. The open triangle is data only sampled from a riffle.

downstream of the Meigs Creek confluence, was sampled as a reference watershed because it is of similar size and topography. It has little mining within its watershed.

Results of the chemical sampling showed no obvious water quality criteria exceedances. Using total dissolved solids, aluminum, iron and sulfate as indicator parameters, abnormally high levels of all these parameters were found randomly throughout the basin. The concentrations of all these parameters were somewhat higher in Meigs Creek below the confluence with Dyes Fork. The maximum concentrations of each parameter were found in Dyes Fork downstream of the coal preparation plant discharge; however, the differences were not dramatic.

The Meigs Creek fish community indicated an impairment downstream of Dyes Fork in 1989 (Figure 9-3). The results also show a substantial improvement in Dyes Fork downstream of the coal preparation plant discharge between 1988 and 1989 (Figure 9-3) Macroinvertebrate samples from 1989 have not been analyzed yet and may provide more insight into the biological impacts in this subbasin.

A control site in the upper part of the basin in Mann's Fork had a total dissolved solids level of 1090 mg/l and a sulfate of 489 mg/l. In contrast, the control site at Olive Green Creek had average total dissolved solids and sulfate concentrations of 408 and 92 mg/l, respectively. The chemical data indicates that there were elevated levels of dissolved metals and sulfate throughout the basin. Alkalinity concentrations throughout the basin and control sites varied randomly between 175 and 210 mg/l, indicating a high buffering capacity for Meigs Creek resulting in normal pH readings between 7.1 and 8.2 S.U. The limestone geology of this subbasin is no doubt responsible for this high alkalinity and alkaline pH levels. A fine silt seemed to be covering much of the substrate throughout the subbasin, possibly caused by the precipitation of dissolved metals. Before the sampling was started a "hot" seep was found flowing off an abandoned strip mine pit on Central Ohio Coal property and into Meigs Creek above Dyes Fork. A sample revealed concentrations of iron, aluminum, sulfate and TDS of 374, 51, 1660, and 2780 mg/l, respectively. The company was contacted and advised to remedy this situation, which it did. At the time of completion of the 1989 survey, results of one metals sample showed iron and aluminum concentrations to be < 0.05 and 0.2 respectively, indicating a successful remedial effort by the company. Further work remains to discern the complete extent and seriousness of mine impacts in this subbasin.

CDO - *Effects of Surface Runoff from an Egg Farm Complex*

With the development of the Daylay-Mad River Egg Farm complex in York Township, Union County, the Central District Surface Water Unit has since 1983 monitored both wastewater effluent and receiving stream quality of this source. Egg wash waters, facility sanitary wastes and miscellaneous wash water are treated either by package wastewater treatment systems followed by a polishing lagoon or by a lagoon system alone. Outlets from the various treatment systems discharge to field tiles or drainage swales in the Powderlick subbasin of Bokes Creek. Poultry wastes, however, are land applied on cropland near these facilities.

One of the environmental concerns associated with land application of poultry wastes is the water quality impact of the runoff on area receiving streams. Of particular concern to downstream uses is the level of nitrate which may affect drinking water quality. Repeated stream sampling from 1986 through 1988 of the NPDES permit stream monitoring locations 901 though 905 by the CDO Surface Water Unit revealed elevated levels of phosphorus, BOD, and nitrogen in the water column. At times nitrogen as NO_3-Nwas

detected at levels from two to five times the public drinking supply nitrate alert level of 10 mg/l. The first order streams in this area, however, do not sustain flow year-round. The drought of 1988 impacted the study streams by drying these water courses completely or to widely separated pools.

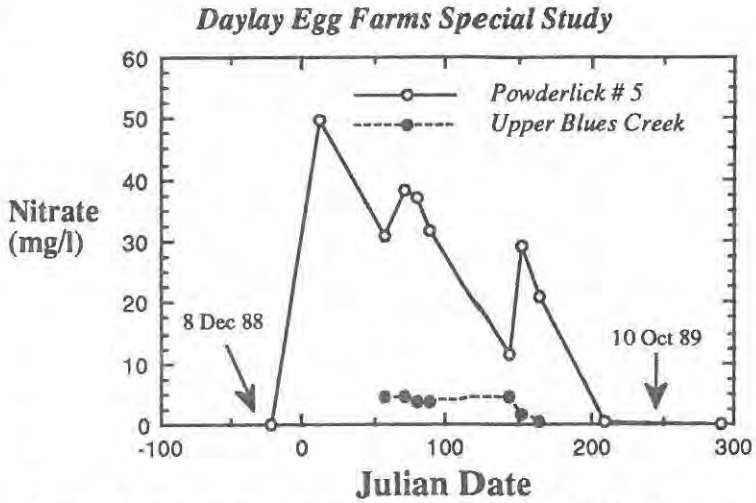


Figure 9-4. Nitrate concentrations in Powderlick Creek and upper Blues Creek from 6 Dec 88 to 10 Oct 89.

A follow-up from the unit's preliminary work was initiated in December 1988 on the Powderlick subbasin to investigate the seasonal changes in the nutrient levels, particularly nitrate, which in the preliminary study varied widely throughout the year. The site chosen, Powderlick Run # 5 at Powderlick Road was downstream of Daylay Farms # 1, #2, and #3 but was upstream of the Mad River egg farm complex receiving stream as well as pastured livestock with access to the stream. A second location, upper Blues Creek (tributary to Mill Cr.) at Yearsley Road, was selected as a control to observe the variance in nitrate levels from a geographically similar sized watershed without the known impacts from either wastewater effluents or land application of poultry wastes.

Data was gathered from March 89 through October 1989. Samples were gathered usually on the same day and generally within a few minutes of each other. The nitrate data does not violate current Ohio water quality standards, however, for any given sampling date between 2-28-89 and 6-13-89 the levels of nitrate in Powderlick Run were significantly above those of the control watershed (Figure 9-4). In addition during the peak spring runoff period when nitrates are of particular concern for Ohio's public water supplies, nitrates in the Powderlick subbasin exceed the 10 mg/l alert level for all dates sampled while the control watershed levels remained below the alert limit.

SWDO - *Preliminary Results of the 1989 Great Miami River Survey*

The survey of the Great Miami River in 1989 was an endeavor to update the water quality information Ohio EPA previously obtained during the 1980 survey of the river. Several construction upgrades have been completed by major dischargers to the Great Miami River and water quality was expected to improve.

Twenty-nine sites were selected in the Great Miami, Mad River, Stillwater River, and Whitewater River from which water samples were obtained for chemical analysis. The stretch of the Great Miami sampled reached from river mile 92.6 to river mile 5.6. One site was sampled in the Mad River at river mile 0.2, one sample from the Stillwater at river mile 0.3 and three sites from the Whitewater River at river miles 8.4, 7.0, and 1.5. Six sites in the Great Miami were selected for sediment collection and eleven sites for toxic analyses. Fish and macroinvertebrates were also sampled in these same rivers.

The Trend Analysis section (Volume V) of this report illustrates the overall improvement in the river as measured by the fish and macroinvertebrates. The preliminary water chemistry data at two sampling locations illustrated in Figure 9-5 shows a general improvement in most of the parameters sampled between 1980 and 1989. As shown in Figure 9-5 heavy metals, nutrients, and BOD concentrations have declined and dissolved oxygen has increased. As illustrated by the biota however, there is still impairment of the WWH aquatic life use but most areas have shown a quantitative improvement since 1980.

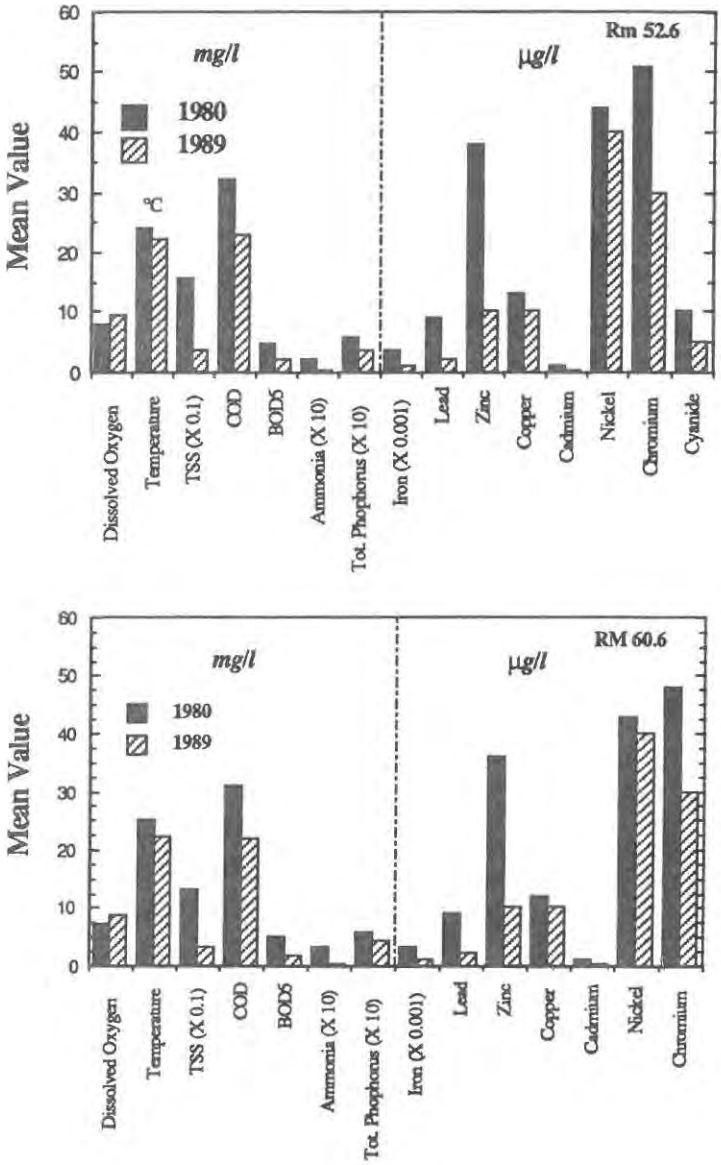


Figure 9-5. Changes in chemical parameters in the Great Miami River at two locations between 1980 and 1989. Note that the measurement scales differ for some parameters.

Section 10

Selected Program Descriptions

Wetlands/401 Water Quality Certifications

The total acreage of marsh or wetland areas in Ohio has not been quantified with any degree of certainty. A complete inventory of the state's wetland resources does not currently exist. The most complete survey is the National Wetlands Inventory, initiated by the U.S. Fish and Wildlife Service in the late 1950s. The Inventory includes only 42 of Ohio's 88 counties. Those 42 counties account for approximately 1/3 of the state's land mass and are located in the northern and eastern sections of the state.

A statewide inventory of wetlands is being conducted by the Remote Sensing Program in the Ohio Department of Natural Resources Division of Soil and Water Conservation, the Ohio Department of Natural Resources Division of Wildlife and the U. S. Soil and Conservation Service. Digital data from the Landsat satellite are being computer classified to find shallow marsh, shrub/scrub wetland, wet meadow, wooded wetland and farmed wetland. The satellite multispectral data which comes from the Thematic Mapper sensor are being combined with digital soils data for certain counties to improve wetland identification.

The wetland inventory will provide planning information in wildlife management of game and threatened species. The inventory is also needed to implement the Swampbuster provision of the 1985 U. S. Farm Bill. As of March 1990, the wetland inventory is complete for 18 northern Ohio counties with 12 of those counties having digital soils data. The inventory is scheduled for completion by the summer of 1991.

The Ohio Department of Natural Resources, Office of Outdoor Recreation Services recently completed the Ohio Wetland Priority Conservation Plan, An Addendum to the 1986 Ohio Statewide Comprehensive Outdoor Recreation Plan (SCORP)". The Priority Plan represents Ohio's commitment to satisfy the Emergency Wetlands Resources Act requirement of a Department of Interior approved wetland component in the SCORP. The Priority Plan contains information concerning the history of Ohio's wetlands and the existing and proposed programs of Ohio's resource agencies involved in wetlands protection. The Priority Plan served as a source of some of the information included in this discussion of wetlands in Ohio.

The Section 401 water quality certification program is the only regulatory tool for protecting wetlands from hydromodification in Ohio. Wetlands are specifically included in the definition of "waters of the state" in the Ohio Revised Code and are protected by Ohio's water quality standards.

All wetlands in Ohio are designated in the water quality standards as State Resource Waters. The anti-degradation policy, included in the water quality standards, states that present ambient water quality in State Resource Waters cannot be degraded for all substances determined to be toxic or to interfere with any designated use. The placement of fill material in a wetland would interfere with the existing beneficial use as provided for by the water quality standards. The dredging of a wetland may also interfere with the maintenance of an existing beneficial use. For example, if a shallowly inundated wetland is utilized by fish as a spawning and nursery area, the deepening of the wetland through dredging may interfere with the existing beneficial use. The Ohio EPA has denied and conditioned Section 401 water quality certifications for projects involving the dredging and the placement of fill material in wetlands to protect these beneficial uses.

The Ohio EPA frequently requests wetland delineation studies be conducted for dredge and fill projects requiring a Section 401 water quality certification. The data generated from these studies are used in determining if the project will be denied a 401 certification or if approved, the extent and type of mitigation required. For example, a project was proposed along the lower end of Cranberry Creek, a small tributary to Lake Erie, to construct a marina. The project involved dredging bottom sediments and installing riprap, sheet piling, a boat ramp and floating docks. It was suspected that the project area contained a significant portion of wetlands. the Ohio EPA requested that the applicant conduct a study to determine the areal extent of the wetland and a complete inventory of plants and animals found at the project site. Based on the study's results, it was determined that approximately two acres of wetland important for fish spawning and nursery habitat would have been degraded by dredging. These impacts would have negatively impacted the warmwater habitat aquatic life use designation of Cranberry Creek and adjoining wetlands within the project area. The marina project was denied based upon the loss of valuable wetlands habitat along Cranberry Creek and unacceptable degradation of the warmwater use designation.

In spite of the apparent strength of the rationale for wetland protection through implementation of the Section 401 certification program, according to Ohio EPA files, only 30 acres of wetlands have been protected from dredging or filling during the period of 1988-1989. This figure does not include the wetland acreage preserved resulting from discussions with Section 404/401 applicants prior to submittal of applications and the subsequent revisions to their project proposals.

Currently no tracking mechanism is in place which would allow the calculation of wetland acreage created through mitigation required through NEPA or the Section 404 process. In addition, no tracking mechanism is available for the calculation of the wetland acreage lost due to draining. Annually, the Section 401 program is maintained by a fulltime staff of one person, plus another 20% of another staff member's time allocated to the program. If a tracking system were to be required, additional resources would have to be made available.

Lake Erie Programs

During 1987, the Ohio EPA reached several milestones toward completion of remedial action plans (RAPs) for Ohio's four areas of concern (the lower Maumee, Black, Cuyahoga and Ashtabula Rivers). Progress reports for each RAP are listed below. One of the major requirements for completion of an adequate RAP is considerable public involvement in the actual development of the plan. In order to achieve this objective, the Ohio EPA has held public meetings in all four areas to explain the RAP process and invite public comments.

In addition to the RAPs, the Ohio EPA continued to work closely with the International Joint Commission (IJC) to meet the other objectives of the Great Lakes Water Quality Agreement. Ohio EPA staff were active on eight IJC committees and assisted in hosting the 1987 IJC biennial meeting in Toledo. As outlined in the Great Lakes International Surveillance Program for Lake Erie (GLISP), monthly water quality monitoring continued on 12 of the larger Lake Erie tributaries and selected public water supply intakes. Sampling to monitor the concentrations of toxic substances in fish tissue and sediment was done at selected sites.

Under the Great Lakes Governors Toxic Substances Agreement, an interagency work group has been established to address emerging fish contamination and advisory issues and to coordinate control of toxic substances with the other Great Lakes states. These activities were also complimentary to the objectives of the Great Lakes Water Quality Agreement.

The Ohio EPA continued to work with the U.S. Army Corps of Engineers and other state and federal agencies to ensure timely and environmentally sound harbor dredging and sediment disposal operations. The agency is currently working with TMACOG to develop cost effective alternatives to open lake disposal. The continued rise in the popularity of lakefront usage has increased the demand for dockage, and the number of requests for 401 certifications allowing expansion of existing marinas or creating new ones has risen proportionately.

There are several areas where agency programs must be expanded to include Lake Erie waters. Biological criteria for inland rivers and streams in the state have recently been developed and adopted into Ohio's Water Quality Standards; however, these criteria currently do not apply to the river mouths, harbors or nearshore areas. Ohio EPA intends to develop biocriteria for river mouth areas within the next three to five years. We also believe that the biocriteria approach is workable for the nearshore and open lake provided the appropriate evaluations are selected and calibration is accomplished. Ongoing chemical and biological assessments of direct Lake Erie dischargers need to be continued to ensure that NPDES limits are protective of the environment and public health. A more rigorous fish tissue sampling program and human health risk assessment procedure is needed, especially since the public's use of the harbor and nearshore areas has dramatically increased . Additional sampling will be needed in the Areas of Concern to further define the extent of toxics contamination and cause and effect relation-

ships. Continued monitoring is also needed to track loadings from Lake Erie tributaries to the lake proper.

Summaries and Significant Activities of "RAPs" for the Cuyahoga River, Maumee River, Ashtabula River and Black River.

Cuyahoga River

The RAP process for the Cuyahoga River was begun in 1987. The Cuyahoga Coordinating Committee was appointed by the Ohio EPA and is a 35 member group responsible for developing the Remedial Action Plan. This committee has

(1) elected a steering committee to set agendas and develop issues to present to the coordinating committee,
(2) formed a nonprofit corporation to provide financial support for the committee,
(3) formed a technical committee to oversee the write-up of the RAP document,
(4) formed a community involvement committee to inform, educate and solicit input from the general public, and
(5) will form a Policy Advisory Group that will be responsible for implementing the selected remedial options.

Significant activities completed or in progress include an annotated bibliography of documents related to the RAP process, a 3-year fish tissue monitoring program, a water quality modeling workshop, a fecal coliform bacteria survey, a grant proposal to the Gund Foundation to support the RAP's efforts in community involvement. A stage 1 report that will identify the impaired uses and causes of impairment will be completed by December 1990. A stage 2 report that will evaluate options and select remedial actions is scheduled for completion in 1992.

Maumee River

In the Maumee River the RAP process has served to focus activities on remedial action that have been planned and implemented and to involve the local citizens in the process. The Maumee River Remedial Action Plan Advisory Committee and nine subcommittees have been established to develop the: (1) investigation report, (2) the Water Quality Problem Matrix, and (3) a set of draft recommended remedial actions. To date a logo has been designed, a quarterly newsletter has been produced, and a Maumee RAP slide presentation has been developed. The Stage 1 report is to be submitted to the IJC in March 1990 and additional information is needed on sediment chemistry, chemical water quality, discharger compliance records and biological community assessments. The stage 2 report that will evaluate options and select remedial actions is scheduled for completion in draft form in December 1990.

Ashtabula River

In the Ashtabula River the RAP process has served to accelerate remedial actions that have been planned and implemented and to involve the local citizens in the process. Since Fields Brook

is being cleaned-up under the Superfund, the Ashatabula River RAP is focusing on the mainstem and harvor areas of the river. The Advisory Council and the Technical, and Communication subcommittees were established in March 1988 and bimonthly meetings are held. There is a quarterly newsletter and information brochures and fact sheets have been produced. The draft Stage 1 report was distributed for review in October 1989 and is currently being revised. A number of monitoring activities are ongoing. For example the Ohio EPA is investigating a Natural Resource Damage Assessment claim for the Ashtabula River, Harbor, nearshore and Fields Brook. A biological survey of the river was conducted as part of this assessment in 1989. Completion of the revised Stage 1 report is planned by July 31, 1990. Stage 2 involves selection of remedial actions, responsibility for implementation, setting a schedule for implementation, and securing funding. Much of the work in the Ashtabula River involves dredging and disposing of highly contaminated sediments. Until the sources and extent of pollution are better defined responsibility for cleanup cannot be delegated.

Black River

Compared to other AoC and RAPs there has been little local interest in the Black River RAP initiative. The RAP process has been on hold since the end of 1987, but there are a number of remedial activities underway independent of the RAP. These include: (1) USX dredging of contaminated PAH sediments from the river, (2) a new westside Lorain WWTP to relieve the overloaded eastside plant (there are plans to eliminate all bypasses and overflows by 2004),. (3) a consent judgement from the U.S District Court to upgrade the Elyria WWTP. The last intensive monitoring data was collected in 1982. No additional monitoring activities are recommended until all of the remedial activities are underway. There are no immediate plans to initiate a public involvement process.

Inland Lakes

Ohio EPA has updated its statewide assessment of the quality of inland lakes for inclusion in the 1990 305(b) report (Ohio EPA 1990). This fulfills a major requirement for the Ohio EPA to qualify for future lakes funding under section 314 of the 1987 Water Quality Act. In addition, Ohio EPA is planning to participate in two lake restoration projects which will involve field monitoring in 1990. More information about the lakes program is available from the Division of Water Quality Planning & Assessment.

Nonpoint Program

Ohio EPA, in fulfillment of the requirements of section 319 of the 1987 Water Quality Act, has updated its statewide assessment of nonpoint sources. This report was submitted under separate cover and is available from the Division of Water Quality Planning & Assessment.

Ohio River (ORSANCO)

Ohio is an original compact state of the Ohio River Valley Sanitation Commission (ORSANCO). ORSANCO, in cooperation with the states, performs most the water quality monitoring and assessment for the mainstem portion of the Ohio River. This includes the production of an Ohio River 305(b) report which is produced under separate cover (ORSANCO 1990). ORSANCO recognizes the need for more integrated assessments and the inclusion of expanded biological data in monitoring efforts. The Ohio EPA has completed some preliminary electrofishing surveys of portions of the Ohio River during 1988 and 1989. The 1989 effort was funded by the a nongame grant from the Ohio Department of Natural Resource, Division of Wildlife (Sanders 1990). The development of biocriteria for the Ohio River is an Ohio EPA priority within the next 3-5 years. Recommendation 3 of the Ohio River 305(b) report (1990), prepared by ORSANCO, is a call to "Develop and carry out a program to characterize the biological community of the Ohio River. Assessment of water quality by using chemical data only, is a limited assessment. A characterization of all aquatic biota is needed to understand the effects of Ohio River Water Quality on the aquatic life."

Economic Analyses

Ohio EPA, Division of Water Pollution Control conducts financial capability analyses for municipal and industrial dischargers to meet the terms and requirements of their NPDES permits. The results of this analysis influences the need to issue a discharge specific variance if an entity is found to be economically incapable of meeting discharge requirements. A summary of the process for evaluating municipal and industrial dischargers follows. The detailed procedure is described in Economic Evaluation Methodology (Ohio EPA 1988b).

Municipal Analysis

The evaluation of the financial capability of a municipal discharger is a three part procedure: a screening review, a cursory review, and a detailed analysis. The screening review addresses the impact of the project on the individual user and is performed initially. The purpose of the screening review is to identify the obviously affordable projects, and eliminate them from further analysis. When the cost of the project results in a household impact above the benchmark, a detailed analysis of the financial health of the municipality will be completed in order to determine whether or not the project is likely to result in substantial and widespread economic and social impact. When the annual cost per user is below the benchmark, a detailed analysis is generally not required, however a cursory review of the overall economic condition of the community will also be used to indicate the need for a detailed analysis. A financial capability analysis which is completed for existing point source discharges who must meet secondary level treatment in order to maintain water quality standards will require actions other than a variance or change in use designation.

The focus of a detailed analysis is on the financial stability of the community, and the changes that are projected to occur in that financial stability as a result of the project. In order to develop

a comprehensive picture of the community, four general areas are considered: 1) socioeconomic factors; 2) financial factors; 3) debt factors; and 4) administrative factors.

Industrial Analyses

Industrial dischargers are analyzed to determine their ability to make the expenditures necessary to meet effluent limitations in a two-part review. The initial screening review determines the impact on the industry and predicts the possibility of plant closure. The detailed analysis will assess the potential impact on the community of a plant closure. Two types of screening reviews can be completed depending on the type of financial data which is available. The most desirable is one performed on plant-specific financial data; however, this information is often not available. If this information is not available, the analysis will be at the firm level, directed at the company as a whole. Both analyses will be completed for a five-year period in order to identify trends. Summary of Expenditures for Wastewater Treatment Incremental costs expended by municipalities to meet their NPDES discharge requirements are summarized in Appendix G. A total of $3.7 billion have been invested in upgrading POTWs in Ohio during the period 1970 to 1987. Of this total $2.7 billion was received through the federal construction grants program.

Expenditures for Water Pollution Control in Ohio, 1987-1988

Capital expenditures for wastewater pollution control in Ohio were compiled for the period January 1987 through December 1988. This information was obtained from Permits To Install (PTI) that were filed with the Division of Water Pollution Control during that period. No figures were available for operation and maintenance costs. The total amount expended was $789 million dollars statewide. Slightly more was spent in the Ohio River basin ($333.7 million) compared to the Lake Erie basis ($299 million). Table 9-1. provides a break-down by major basin. In a few cases it was not possible to determine in which basin the expenditure took place. These are included under "overlapping Basins". Seven different types of pollution control activity were listed:

1) publically owned treatment works (POTWs);
2) industrial treatment facilities;
3) industrial pre-treatment facilities;
4) on-site systems;
5) semi-public facilities;
6) sewers, pumps, and lift stations; and'
7) other.

Figures depicting the distribution of funds across these seven categories by major river basin are included in Volume II.

Table 9-1.Total capital expenditures for water pollution control during January 1987 through December 1988 in Ohio's major river basins (compiled by Ohio EPA, WPC from PTI submittals).

River Basin	Expenditures ($ in millions)
Hocking River	5.4
Lower Scioto River	13.1
Upper Scioto River	34.2
Grand River	5.7
Maumee River	163.1
Sandusky River	4.5
Central Ohio R. tributaries	49.4
Ashtabula River	4.7
Little Beaver Creek	3.5
Southeast Ohio R. tributaries	8.9
Southwest Ohio R. tributaries	3.2
Little Miami River	44.2
Huron River	12.5
Rocky River	4.0
Great Miami River	110.8
Chagrin River	2.2
Portage River	61.3
Lower Muskingum River	2.3
Walhonding River	3.1
Tuscarawas River	27.4
Mahoning River	24.8
Cuyahoga River	12.7
Black River	28.2
Vermilion River	0.1
Wabash River	0.7
Mill Creek	2.7
Misc. Overlapping basins	156.2
TOTAL	**$789.0**

Ohio EPA Toxics Strategy

The Divisions of Water Quality Planning & Assessment and Water Pollution Control have recently completed the Ohio Toxic Substance Control Strategy (Ohio EPA 1989). This document outlines Ohio's program to control toxic substances. The strategy outlines specific procedures and guidelines that Ohio EPA staff are to use in developing water quality based effluent recommendations. This was submitted to and approved by U. S. EPA, Region V in 1989. Copies of the document can be obtained by contacting the Division of Water Quality Monitoring and Assessment. The 1992 Water Resource Inventory will integrate more fully the data gathered in support of the toxics strategy and human health criteria.

Section 11

Special State Concerns

Interagency Work Group on Fish Contaminant Advisories

An interagency work group has been established between the Ohio EPA, Ohio Department of Natural Resources (ODNR), Ohio Department of Health (ODH), and the Ohio Department of Agriculture (ODA) to deal with fish tissue contamination issues and advisories. The work group was initiated in September 1987. Specific issues that are being examined include Lake Erie concerns, short-term data needs, organization of existing information, and a clear definition of each agency's authority. In addition to this group OEPA, ODNR, and ODH all participate in the Great Lakes Governors Task Force on Great Lakes toxics problems which was previously described under Lake Erie programs.

Exotic Species in Ohio Waters

The introduction of exotic species in Ohio Surface Waters has been a serious problem for 100 years. Exotic species such as carp and goldfish are common in Ohio waters. These species seem to do best in areas with moderate to high degradation of habitat or water chemistry. Several recently introduced exotic species have become subjects of special concern in Lake Erie.

Zebra Mussel (*Dreissena polymorpha*)[1]

Zebra mussels, which are native to southern and central Asia, are believed to have entered the Great Lakes in 1986 via the discharge of ballast was from a ship. By 1989 the zebra mussel had spread throughout Lake Erie. Zebra mussels colonize quickly and have been reported at densities up to 30,000 individuals per square meter. The effects of this mussel on fish and wildlife is unknown at this time. It is known to have economic impacts by fouling water intake systems in Lake Erie. This species could have beneficial effects as a food supply for certain species of fish and birds and may enhance water quality by filtering suspended particles while feeding. It may also serve as an indicator of toxic pollution via its ability to concentrate certain pollutants. The effects of its large filtering capacity on other species in the lake are unclear at this time. Thus, it will be important to monitor the effects of the zebra mussel especially given the large economic importance of Lake Erie to Ohio. The Ohio Division of Wildlife is funding a research project by Dr. Bruce Vondracek of the Ohio Cooperative Fishery and Wildlife Research Unit to study the mussel's impact on walleye reef spawning. OSU Sea Grant will also fund a proposal to study the feeding habits of freshwater drum on zebra mussels. The Ohio Division of Wildlife will continue to assess the stock dynamics of walleye and yellow perch in Lake Erie, as it has in the past, which should enable it to detect impacts of zebra mussels (if any) on the stocks.

[1] Summarized from the Ohio Department of Natural Resources Non-Game Quarterly, Winter 1989-90, Volume 5, No. 2.

Other Exotic Species

In addition to the zebra mussel other exotic species may be of concern in Ohio. Two recent arrivals are the spiny water flea (*Bythotrephes cederstroemi*) and river ruffe (*Gymnocephalus cernua*). The effects of the spiny water flea could come from its foraging on daphnia, rotifers, and copepods which themselves are forage for young fish of such such species as emerald shiners. It is unclear whether they could disrupt the trophic relationships in Lake Erie or whether they will simply replace the plankton they consume as forage for fish. Yellow perch and walleye have been reported to consume spiny water fleas.

The river ruffe, like the zebra mussel, may also have arrived in the ballast of ships. The concern with this species is that it would compete for forage with yellow perch. Because it reproduces earlier than yellow perch and has little or no sport or commercial significance it would be an unsatisfactory replacement for yellow perch in Lake Erie. Because of its spines it does not seem to be a preferred food item of most large predators. Because the effects of each of these exotic species is unknown they are of special concern to the ecological and economic interests of Lake Erie.

Biocriteria in Ohio's WQS

Ohio EPA first proposed biological criteria as part of its water quality standards regulations in November 1987 and reproposed them in October 1989. Following extensive interaction with interested parties the revised WQS were adopted in February 1990 and will be effective in May 1990. A three volume set entitled Biological Criteria for the Protection of Aquatic Life contains the rationale, development, and field methods for deriving and using biocriteria in Ohio (Ohio EPA 1987a,b; 1989a,b). An addendum to Volume II (Ohio EPA 1989) and a revised Volume III (Ohio EPA 1989b) were produced in 1989. This issue is also receiving national attention as evidenced by the first national workshop on biocriteria held in Chicago in December 1987. Since that initial effort the U. S. EPA has produced guidance on Rapid Bioassessment (U. S. EPA 1989) and will release national program guidance and a policy statement on biocriteria in April 1990.

REFERENCES

Baker, D. B. 1987. Lake Erie agro-ecosystem program: sediment, nutrient, and pesticide export studies. Submitted to U.S. EPA, Great Lakes National Program Office. Water Quality Laboratory, Tiffin, Ohio. 117 pp. + appendices. Heidleburg College.

Davic, R. D. and J. E. DeShon. 1990. Ohio's publicly owned lakes/reservoirs/ponds. 1990 305(b) report. Volume III. 1990 Ohio Water Quality Inventory. Division Water Quality Planning and Assessment. Columbus, Ohio. 7 pp. + appendices.

Estenik, J. F. and Z. Clayton. 1988. Spills reported in Ohio, January 1,1978 - December 31,1987. Division of Water Quality Monitoring and Assessment and Office of Emergency Response. Columbus, Ohio.

Fausch, K. D., J. R. Karr, and P. R. Yant. 1984. Regional application of an index of biotic integrity based on stream fish communities. Transactions of the American Fishery Society 113:39-55.

Harsh, K. M. and J. Walters. 1988 Spills reported in Ohio: October 1972—April 30, 1984. Office of Emergency Response. Columbus, Ohio. pp. 46.

Heitzman, T. G. 1986. Special study - 1986/87 305(b) sediment metals report. Volume III. Water Quality Inventory - 1986. Division of Water Quality Monitoring and Assessment. Columbus, Ohio.

Karr, J. R., K. D. Fausch, P. L. Angermeier. P. R. Yant, and I. J. Schlosser. 1986. Assessing biological integrity in running waters: A method and its rationale. Illinois Natual History Survey Special Publication No. 5, 28 pp. Champaign, Illinois

Karr, J.R. and D.R. Dudley. 1981. Ecological perspective on water quality goals. Environmental Management 5(1): 55-68.

Kelly, M. H. and R. L. Hite. 1984. Evaluation of Illinois stream sediment data: 1974-1980. Illinois Environmental Protection Agency, Division of Water Pollution Control. Springfield, Illinois.

Ohio Department of Natural Resources. 1982. Inventory of Ohio's Lakes. By D. F. Bowell, Water Inventory Report No. 26.

Ohio Department of Natural Resources. 1960. Gazetteer of Ohio streams. Ohio Department of Natural Resources, Division of Water. Ohio Water Inventory Plan Report No. 12. Columbus, Ohio.

Ohio Department of Natural Resources. 1988. Draft Ohio wetland priority conservation plan, an addendum to the 1986 Ohio statewide comprehensive outdoor recreation plan. Office of Outdoor Recreation. Columbus, Ohio.

Ohio Environmental Protection Agency. 1986. Water Quality Inventory - 1986 305(b) report. Volume I. Theresa G. Heitzman, editor. Division of Water Quality Monitoring and Assessment.

Ohio Environmental Protection Agency. 1987a. Biological criteria for the protection of aquatic life: Volume I. The role of biological data in water quality assessment. Division of Water Quality Monitoring and Assessment, Surface Water Section, Columbus, Ohio.

Ohio Environmental Protection Agency. 1987b. Biological criteria for the protection of aquatic life: Volume II. Users manual for biological field assessment of Ohio surface waters. Division of Water Quality Monitoring and Assessment, Surface Water Section, Columbus, Ohio.

Ohio Environmental Protection Agency. 1987c. Users manual for wasteload allocation. Division of Water Quality Monitoring and Assessment. Columbus, Ohio.

Ohio Environmental Protection Agency. 1988a. Water Quality Inventory - 1988 305(b) report. Volume I. Edward T. Rankin, editor. Division of Water Quality Monitoring and Assessment.

Ohio Environmental Protection Agency. 1989a. Biological criteria for the protection of aquatic life: Volume III. Standardized biological field sampling and laboratory methods for assessing fish and macroinvertebrate communities. Division of Water Quality Monitoring and Assessment, Columbus, Ohio.

Ohio Environmental Protection Agency. 1989b. Addendum to Biological criteria for the protection of aquatic life: Volume II. Users manual for biological field assessment of Ohio surface waters. Division of Water Quality Monitoring and Assessment, Surface Water Section, Columbus, Ohio.

Ohio Environmental Protection Agency. 1990. Ohio's nonpoint source pollution assessment. Division of Water Quality Planning and Assessment, Columbus, Ohio.

Omernik, J. M. 1987. Ecoregions of the conterminous United States. Ann. Assoc. Amer. Geogr. 77(1):118-125.

ORSANCO. 1990. Assessment of water quality conditions, Ohio River main stem, water years 1986-1987. Ohio River Valley Sanitation Commission, Cincinnati, Ohio.

Rankin, E. T. 1989. The Qualitative Habitat Evaluation Index (QHEI). Rationale, methods, and applications. Division of Water Quality Planning and Assessment, Ecological Analysis Section. Columbus, Ohio.

Sanders, R. R. 1990. A 1989 night electrofishing survey of the Ohio River mainstem (RM 280.8-442.5). Ohio EPA, Division of Water Quality Planning and Assessment, Ecological Assessment, Columbus, Ohio.

Trautman, M. B. 1981. The fishes of Ohio. (2nd edition). Ohio State University Press. Columbus, Ohio. 782 pp.

U.S. General Accounting Office. 1986. The nations water: key unanswered questions about the quality of rivers and streams. U.S. GAO, Program Evaluation & Methods Division, Washington, D.C. GAO/PEMD-86-6.

Whittier, T.R., D.P. Larsen, R.M. Hughes, C.M. Rohm, A.L. Gallant, and J.M. Ornernik. 1987. The Ohio stream regionalization project: a compendium of results. U.S. EPA — Freshwater Research Laboratory, Corvallis, OR. 163 pp.

Yoder, C. O. 1989. The development and use of biocrteria for Ohio surface waters. Pages139-146 In: Gretchin H. Flock, Water Quality Standards for the 21st Century. USEPA Criteria and Standards Division, Washington, D.C.

Appendix A. List of streams that have impairment of aquatic life uses ("Long List").

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH 1 3	18-040	EAGLE CREEK (SOUTH FORK EAGLE CR. TO MAHONING R.)	8800	EB	WWH	0.0	0.0	0.00	0.8	16H,	73H,
OH 1 6	18-043	SOUTH FORK EAGLE CREEK	8800	MB	WWH	3.1	0.0	1.00	0.0	16H,11M,	73H,
OH 1 8	18-040	EAGLE CREEK (HEADWATERS TO SOUTH FORK EAGLE CREEK)	8800	EB	WWH	9.7	0.0	1.1	3.3	12H, 7H, 6H,	2H,
OH 1 11	18-065	HIRAM TRIB.	8800	EB	WWH	0.0	0.0	0.00	1.3	12H, 6H,	2H,
OH 1 30.1	18-066	NAYLOR DITCH (SEBRING)	8800	EC	LRW	0.0	0.0	0.0	1.0	5H,	1H,40H,
OH 1 33	18-063	FISH CREEK	8800	MB	WWH	0.0	0.0	0.1	4.1	12H, 6H,	2H,
OH 2 1	18-001	MAHONING RIVER (PA. TO YELLOW CREEK)	8800	EB	WWH	0.0	0.0	0.0	4.0	5H, 6H, 8H,12H,	1H, 2H,40M,85M,
OH 2 7	18-001	MAHONING RIVER (YELLOW CREEK TO MILL CREEK)	8800	EB	WWH	0.0	0.0	0.0	6.2	3H, 5H, 6H, 8H,	1H, 2H,85H,40M,
OH 2 12	18-020	MILL CREEK	8800	EB	WWH	0.0	0.00	10.1	10.80	12H, 6H, 5H,11M,	2H,32M,40S,
OH 2 13	18-021	BEARS DEN RUN	8800	EB	WWH	0.0	0.0	0.0	4.10	16M, 1H, 5H,12M,	86M,40H, 1H,65M,
OH 2 14	18-022	AX FACTORY RUN	8800	EB	WWH	0.0	0.0	0.00	1.5	15H,12H,	74H,40H,
OH 2 15	18-023	ANDERSONS RUN	8800	EB	WWH	0.0	0.0	0.00	1.5	12H,15M,	2H,74M,
OH 2 16	18-024	CRANBERRY RUN	8800	EC	WWH	0.0	0.0	0.00	0.5	12H,	40H,
OH 2 17	18-025	INDIAN RUN	8800	EB	WWH	0.0	0.0	0.00	1.2	5H,	40H,32S,
OH 2 18	18-026	SAW MILL RUN	8800	EC	WWH	0.0	0.0	0.00	1.0	12H,	2H,
OH 2 20	18-001	MAHONING RIVER (MILL CREEK TO MEANDER CREEK)	8800	EB	WWH	0.0	0.0	0.0	8.5	5H,12H, 6M, 8M,	2H,85H,
OH 2 23	18-015	MEANDER CREEK	8800	EB	WWH	0.0	0.0	0.00	2.0	11H,12H, 6H, 5M,	1H, 2H,
OH 2 27	18-030	MOSQUITO CREEK (MOSQUITO CR. RES. TO MAHONING R.)	8800	EB	WWH	0.0	0.0	0.0	11.8	12H, 6H, 5M,15M,11S,	2H,74M,86S, 1S,
OH 2 31	18-030	MOSQUITO CREEK (HEADWATERS TO MOSQUITO CR. RES.)	8800	EB	WWH	0.0	0.0	1.00	0.0	15H,	74H,
OH 2 35	18-001	MAHONING RIVER (MEANDER CREEK TO DUCK CREEK)	8800	EB	WWH	0.0	0.0	0.0	15.3	5H, 6H,12H, 3M, 8H ,19M,	1H, 2H,40M,
OH 2 37	18-028	RED RUN	8800	EC	LRW	0.0	0.0	0.0	4.7	5H, 6H,	1H,40H,
OH 2 37.1	18-067	TRIB. TO RED RUN (WARREN)	8800	EC	LRW	0.0	0.0	0.00	0.5	5H,	40H,
OH 3 1	18-504	LITTLE YANKEE RUN	8800	MB	WWH	5.30	0.0	0.0	7.90	12H, 5M,	2H,40M, 1M,65S,
OH 3 2	18-505	LITTLE DEER CREEK	8800	MB	WWH	0.50	0.0	0.00	0.5	6H,	90H,
OH 3 3	18-506	YANKEE RUN	8800	MB	WWH	0.0	0.0	0.00	0.5	12H, 5S,	2H, 1S,65S,
OH 3 3.1	18-528	MUD RUN	8800	MB	WWH	0.0	0.0	0.0	2.0	12H,	40H,
OH 3 10	18-550	PYMATUNING CREEK (HEADWATERS TO SHENANGO RES.)	8800	MB	WWH	0.0	0.0	0.50	0.5	15H,	85H,
OH 4 3	08-100	NORTH FORK (BULL CREEK TO LITTLE BEAVER CREEK)	8800	MB	WWH	0.0	0.0	5.6	0.5	1M, 5H,	1H, 2M,
OH 4 7	08-104	LESLIE RUN	8800	MB	WWH	0.0	0.0	0.10	3.30	5H,12M,	1H, 2M,
OH 4 7.1	08-119	TRIB. TO LESLIE RUN	8800	MB	LRW	0.00	0.0	0.0	2.00	5H,12M,	1H,
OH 4 10	08-100	NORTH FORK (PA. TO BULL CREEK)	8800	MB	WWH	0.0	0.00	1.5	0.0	5H, 9H,11S,	1H, 2H,51S,
OH 4 11.3	08-117	WEST FORK STATELINE CREEK	8800	MB	WWH	0.1	0.0	1.2	1.7	11H,	51H,
OH 4 12	08-114	HONEY CREEK	8800	MB	WWH	0.0	0.0	0.0	13.0	12H,11H,	2H,51H,

ppendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
)H 4 21	08-204	MIDDLE RUN	8800	MC	WWH	0.0	0.0	0.0	0.50	6H,	90H,
)H 4 22	08-200	MIDDLE FORK (EAST BRANCH TO MIDDLE RUN)	8800	MB	WWH	0.00	0.70	12.2	0.0	2H,12S,	85H, 2S,
)H 4 24	08-200	MIDDLE FORK (HEADWATERS TO EAST BRANCH)	8800	MB	WWH	0.00	0.60	8.50	19.40	2H,12M,16S,11S,	85H, 2M,14S,71S,
)H 4 25	08-206	EAST BRANCH MIDDLE FORK	8800	MB	WWH	0.80	0.0	0.0	2.20	16H,	71H,
)H 4 26	08-207	CHERRY VALLEY RUN	8800	MB	WWH	0.0	0.0	0.00	2.5	12H,11S,	2H,51S,
)H 4 34.1	08-308	CHEMLIME TRIB.	8800	MB	LRW-P	1.5	0.0	0.0	0.5	6H, 5H,	64H,
)H 4 34.2	08-310	TRIB. TO W. FK. L. BEAVER CR. (RM 13.0)	8800	EC	WWH	0.0	0.0	0.0	2.0	5H,	90H,
)H 4 34.3	08-309	ROWLEY RUN	8800	EC	WWH	0.0	0.0	0.0	2.0	6H,	90H,
)H 5 1	06-200	CROSS CREEK (MCINTYRE CREEK TO OHIO RIVER)	8800	EB	WWH	2.0	0.0	2.1	1.5	12H, 6M, 5M,11S,	2H,51M, 1M,
)H 5 2	06-201	DRY FORK	8800	EB	WWH	0.0	0.0	0.0	5.6	12H,10H, 5M,	2H,51H,
)H 5 2.1	06-216	YELLOW BOY RUN	8800	EB	LRW	0.0	0.0	0.0	1.0	10M,11H,	51H,
)H 5 2.2	06-217	WINTERSVILLE 'E' TRIB.	8800	EB	LRW	0.0	0.0	0.0	1.2	12H,	2H,
)H 5 2.3	06-218	WINTERSVILLE "D" TRIB.	8800	EB	WWH	0.0	0.0	0.0	2.0	12H,	2H,
)H 5 3	06-210	MCINTYRE CREEK	8800	EB	WWH	0.0	0.0	0.5	12.2	11H,10M,	51H,
)H 5 9	06-200	CROSS CREEK (SALEM CREEK TO MCINTYRE CREEK)	8800	EB	WWH	1.2	0.0	8.6	2.0	11S, 5M,10H,12S,	2S,51H,
)H 5 10	06-209	BARBERS HOLLOW	8800	EB	WWH	0.0	0.0	0.0	4.1	5S,12H,	2H,
)H 5 12	06-203	CEDAR LICK CREEK	8800	EB	WWH	2.10	0.0	0.0	3.20	12H, 5M,	2H,
)H 5 14	06-200	CROSS CREEK (HEADWATERS TO SALEM CREEK)	8800	EB	WWH	3.10	0.0	6.90	0.0	5M,11H,	51H,
)H 5 24	06-066	WILLS CREEK	8800	EB	CWH	2.20	0.0	2.80	1.20	11H,	51H,
)H 5 38	06-900	YELLOW CREEK (BRUSH CREEK TO OHIO RIVER)	8800	EB	WWH	0.0	0.0	0.80	3.80	15H,	73H,51S,
)H 5 43	06-910	NORTH FORK YELLOW CREEK	8800	EB	WWH	16.1	0.0	1.8	0.0	5H,11M,	51H,
)H 5 43.2	06-941	TRIB. TO NORTH FORK YELLOW CREEK	8800	EB	LRW	0.0	0.0	0.0	2.0	10H,	51H,
)H 5 47	06-914	RANDOLPH RUN	8800	EB	LRW	0.0	0.0	0.0	2.8	11M,10H, 5S,	51H,
)H 5 54	06-900	YELLOW CREEK (TOWN FORK TO BRUSH CREEK)	8800	EB	WWH	1.10	0.0	3.10	0.0	11H,	51H,
)H 5 60	06-900	YELLOW CREEK (ELKHORN CREEK TO TOWN FORK)	8800	EB	WWH	0.0	0.0	0.0	17.1	5S,12M,11H,	51H, 2M,
)H 5 76	06-900	YELLOW CREEK (HEADWATERS TO ELKHORN CREEK)	8800	EB	WWH	0.0	0.0	0.0	8.2	11H,	51H,
)H 5 77	06-936	WOLF CREEK	8800	EB	LRW	0.0	0.0	0.0	4.5	10H,11S,	51H,52S,
)H 6 1	06-500	MCMAHON CREEK (WILLIAMS CREEK TO OHIO RIVER)	8800	EB	WWH	1.30	0.0	6.80	4.60	11H,	51H,
)H 6 5	06-510	LITTLE MCMAHON CREEK	8800	EB	WWH	3.90	0.0	0.0	4.40	10H,11M,12S,	51H, 2S,52S,
)H 6 5.1	06-519	TRIB. TO LITTLE MCMAHON CREEK (RM 2.3)	8800	EC	LRW	0.0	0.0	0.00	0.5	10H,	51H,
)H 6 7	06-512	KINGS RUN	8800	EB	LRW	1.7	0.0	0.0	0.5	10H,11H,	51H,52S,
)H 6 8	06-513	AULTS RUN	8800	EB	WWH	0.0	0.0	0.0	3.1	10H,11H,	51H,
)H 6 10	06-500	MCMAHON CREEK (HEADWATERS TO WILLIAMS CREEK)	8800	EB	WWH	9.6	0.0	0.0	5.8	11H,12H,	51H, 2S,57H,
)H 6 30	06-806	TOWN RUN	8800	EB	WWH	0.0	0.0	0.00	2.9	12H, 6M,	2H,
)H 5 34	06-800	WHEELING CREEK (HEADWATERS TO COX RUN)	8800	EB	LWH	0.0	0.0	0.00	3.3	10H,11H,	51H,52S,

Appendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH 6 49	06-058	DEEP RUN	9002	MC	WWH	0.00	0.00	0.00	0.50	10H,	50H,
OH 6 50	06-600	SHORT CREEK (PINEY FORK TO OHIO RIVER)	9002	MB	LWH	0.00	0.00	0.00	0.50	16H,11H,	73H,51H,31M,32M,
OH 6 73	06-617	MIDDLE FORK SHORT CREEK	8800	MB	LWH	0.0	0.0	0.00	1.9	12S, 6S,10H,11H,	2S,51H,
OH 6 73.1	06-619	SALLY BUFFALO CREEK	8800	MB	WWH	0.0	0.0	0.00	0.5	10H,11H,	51H,
OH 7 1	06-700	SUNFISH CREEK (PINEY FORK TO OHIO RIVER)	8800	EB	EWH	14.1	0.0	0.0	0.6	15H,	73H,
OH 7 5	06-700	SUNFISH CREEK (HEADWATERS TO PINEY FORK)	8800	EB	WWH	14.8	0.0	0.0	0.5	16H,	86H,
OH 7 7	06-705	EAST FORK PINEY FORK	8800	EB	WWH	0.0	0.0	0.0	5.0	12H,16M,	2H,86M,
OH 7 8	06-706	STANDINGSTONE RUN	8800	EB	WWH	0.90	0.0	0.0	2.70	12H,	2H,
OH 7 17	06-045	BIG RUN	8800	EB	LWH	0.0	0.0	0.0	4.6	15H,	80H,
OH 7 18	06-100	CAPTINA CREEK (BEND FORK TO OHIO RIVER)	8800	EB	EWH-P	0.00	17.40	0.60	0.00	11H, 1M,	52H,57H,
OH 7 19	06-101	CAT RUN	8800	EB	WWH	0.0	2.20	0.0	5.00	15H,	86H,
OH 7 24	06-106	BEND FORK	8800	EB	WWH	10.00	0.0	0.0	3.00	12H,11S,	2H,40S,
OH 7 33	06-114	BERRYS RUN	8800	EC	WWH	0.0	0.0	0.0	2.3	12H,	90H,
OH 7 36	06-123	NORTH FORK CAPTINA CREEK	8800	EB	EWH	2.6	0.0	0.5	7.9	12H,	2H,
OH 7 48	06-048	BIG RUN	8800	EB	LWH	0.00	0.0	0.00	4.50	10H,11H,	51H,
OH 7 50	06-049	WEGEE CREEK	8800	EB	LRW	0.0	0.0	0.0	7.6	10H,11H,	51H,
OH 8 78	06-013	LEITH RUN	9002	MB	WWH	0.50	0.00	0.50	0.00	16H,	73H,
OH 8 81	06-015	COLLINS RUN	8800	MC	WWH	0.0	0.0	0.90	0.0	12H,	2H,
OH 9 2	06-300	DUCK CREEK (E/W FORK DUCK CREEK TO OHIO RIVER)	8800	MB	LWH	0.0	0.0	24.3	0.0	11H,	51H,52S,
OH 9 11	06-322	MIDDLE FORK DUCK CREEK	9002	EC	LWH	0.00	0.00	0.00	0.50	10H,	50H,
OH 9 27	06-340	WEST FORK DUCK CREEK (SALT RUN TO E. FK. DUCK CR.)	8800	MB	LWH	13.6	0.0	10.0	0.0	11H,	51H,
OH04-999	04-999	MIAMI-ERIE CANAL	8800	MB	WWH	0.0	0.0	0.00	4.6	16H,12M,11M,15S,	71H, 2M,74S,65H,
OH10 1	17-500	TUSCARAWAS RIVER (PIGEON RUN TO SANDY CREEK)	8800	EB	WWH	0.0	0.0	0.0	13.6	12H, 6M, 3M,	2H, 1M,84M,
OH10 5	17-500	TUSCARAWAS RIVER (NEWMAN CREEK TO PIGEON RUN)	8800	EB	WWH	0.0	0.0	0.0	5.2	6H,12H, 3M, M,16M ,11S,	1H, 2M,84M,71S,
OH10 7	17-534	NEWMAN CREEK	8800	EC	WWH	0.0	0.0	0.00	0.5	3H,	1H,
OH10 9	17-500	TUSCARAWAS RIVER (CHIPPEWA CREEK TO NEWMAN CREEK)	8800	EB	WWH	0.0	0.0	0.0	11.3	6H,12H, 3H, 5M,16M,	1H, 2H,40M,63M ,71M,82M,
OH10 11	17-537	FOX RUN	8800	EC	WWH	0.0	0.0	0.00	0.5	12H, 3M,	2H, 1M,
OH10 13	17-550	CHIPPEWA CREEK (STEELE DITCH TO TUSCARAWAS RIVER)	8800	EB	MWH	0.0	0.0	0.10	12.70	11M,12H,	2H, 1H,71M,76S,
OH10 13.1	17-562	SILVER CREEK	8800	EC	WWH	0.0	0.0	0.0	5.0	12H,	2H,
OH10 14	17-551	RED RUN	8800	EB	WWH	0.0	0.0	0.0	6.0	12M,16M,	2H,71M,
OH10 16	17-553	RIVER STYX	8800	EB	MWH	0.0	0.0	17.5	0.5	12H, 5S,	2H, 1H,14S,
OH10 17	17-554	HOLMES BROOK	8800	EB	WWH	0.0	0.0	0.0	4.6	11H,	11H,
OH10 19	17-556	LITTLE CHIPPEWA CREEK	8800	MB	WWH	0.0	0.0	0.0	11.5	12H, 5M,16M,	2H,71M,

ppendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
H13 16	17-405	ELM RUN	8800	MB	WWH	0.0	0.0	0.00	0.5	6H,	90H,
H13 20	17-400	SUGAR CREEK (HEADWATERS TO M. FK. SUGAR CREEK)	8800	EB	WWH	0.0	0.0	0.50	0.0	12H,	14H,
H13 22	17-418	LITTLE SUGAR CREEK	8800	EB	WWH	0.0	0.0	0.50	0.0	12H,	14H,
H14 1	17-350	STILLWATER CREEK (BRUSHY CREEK TO TUSCARAWAS R.)	9002	MB	WWH	0.30	0.00	1.00	3.20	12H,16H,	2H,71H,
H14 2	17-360	LITTLE STILLWATER CREEK	8800	MC	WWH	0.0	0.0	0.00	0.5	12H,	90H,
H15 1	17-500	TUSCARAWAS RIVER (EVANS CREEK TO WALHONDING RIVER)	9002	MB	EWH-P	6.90	0.00	5.80	1.10	12H,16S,22S, 5S,	1H,86S,90S,
H15 3	17-502	WHITE EYES CREEK	8800	EB	WWH	0.0	0.0	0.50	0.0	10H,16M,	51H,84M,71S,
H15 6	17-505	EVANS CREEK	8800	EB	WWH	0.0	0.0	0.00	1.3	16H,10M,	51H,71M,
H15 19	17-500	TUSCARAWAS RIVER (STILLWATER CREEK TO DUNLOP CR.)	9002	MB	EWH-P	0.00	18.50	0.50	0.00	16H,12M,	86H, 2M,
H15 24	17-500	TUSCARAWAS RIVER (SUGAR CREEK TO STILLWATER CREEK)	9002	MB	WWH	0.00	1.00	10.00	0.10	6H,12H, 5S, 3S,11S,10S,	2H, 1M,51S,85S,
H15 26	17-522	PONE RUN	8800	EC	WWH	0.0	0.0	0.50	0.0	5H,	90H,
H15 28	17-524	OLDTOWN CREEK	9002	MC	WWH	0.00	0.00	0.00	0.50	10H,	50H,
H15 30	17-526	CROOKED CREEK	9002	EC	WWH	0.00	0.00	0.00	0.50	10H,	50H,
H15 31	17-500	TUSCARAWAS RIVER (CONOTTON CREEK TO SUGAR CREEK)	9002	MB	WWH	0.00	0.80	2.70	0.80	6H,12H, 5H, 3M,16M ,11M,10M,14	1H,2H,51M,73M ,85S,66S,
H15 32	17-500	TUSCARAWAS RIVER (SUGAR CREEK TO NEWMAN CREEK)	8800	EB	WWH	0.0	0.0	0.0	7.6	12H, 3M,16M,11M, 5M,	1H, 2M,
H16 16	17-730	BLACK FORK MOHICAN R. (ROCKY FORK TO CLEAR FORK)	8905	MB	WWH	1.00	0.00	0.00	13.00	5H,12M,16S,	1H, 3M, 2S,
H16 19	17-733	ROCKY FORK MOHICAN RIVER	8800	EB	WWH	1.4	0.0	0.00	15.0	5H, 6M,12S,16S, S,	1H, 2H,40M,71S,40S,
H16 20	17-734	TOUBY RUN	8800	EC	WWH	0.0	0.0	0.00	2.3	5H,	1H,40S,
H16 21	17-730	BLACK FK. MOHICAN R. (WHETSTONE CREEK TO ROCKY FK)	8800	EB	WWH	0.0	0.0	0.00	0.5	6H,	90H,
H16 23	17-730	BLACK FK MOHICAN R(LEATHERWOOD CR TO WHETSTONE CR)	8800	MB	WWH	0.0	0.0	0.00	8.3	12H,	2H,
H16 28	17-730	BLACK FK MOHICAN R.(HEADWATERS TO LEATHERWOOD CR.)	8800	MB	WWH	0.0	0.0	3.2	8.4	12H, 6M, 5M,	2H, 1M,40S,85S,14S,
H17 14	17-718	JEROME FORK MOHICAN R. (LANG CREEK TO LAKE FORK)	8800	MB	WWH	0.0	0.0	0.0	12.3	5H,12H, 6M,	1H, 2H,
H17 21	17-725	LANG CREEK	8800	MB	WWH	2.4	0.0	0.00	0.8	5H,12H, 6M,	1H, 2H,
H17 22	17-726	JAMISON CREEK	8800	MB	WWH	0.50	0.0	0.00	0.70	12H, 5S,	40H, H,
H17 22.1	17-743	TRIB. TO JAMISON CREEK	8800	MB	WWH	0.0	0.0	0.0	1.2	5H, 6M,	1H,40S,
H17 23	17-727	TOWN RUN	8800	MB	WWH	0.0	0.0	0.00	0.5	12H, 5S,	40H, 1M,40S,
H17 24	17-718	JEROME FORK (LEIDIGH MILL/ORANGE CR. TO LANG CR.)	8800	MB	WWH	0.0	0.0	0.70	0.9	6H,	90H,
H18 1	17-650	KOKOSING RIVER (JELLOWAY CREEK TO MOHICAN RIVER)	8800	MB	EWH-P	8.2	0.0	3.2	0.0	6H,	90H,
H18 5	17-654	JELLOWAY CREEK	8800	MB	EWH-P	0.0	0.0	3.00	1.4	12H,16S,	14H,77M,76S,
H18 7	17-656	EAST BRANCH JELLOWAY CREEK	8800	MB	EWH-P	0.0	0.0	4.0	0.60	12H,	2H,14M,
H18 12	17-650	KOKOSING RIVER (WOLF RUN TO JELLOWAY CREEK)	8800	MB	EWH-P	4.8	0.0	5.2	0.0	12H,	2H,
H18 14	17-662	SCHENCK CREEK	8800	MB	EWH-P	0.0	0.0	2.80	0.0	12H, 2M,	14H,84M,
H18 22	17-650	KOKOSING RIVER (N. BR. KOKOSING R. TO WOLF RUN)	8800	MB	EWH-P	5.7	0.0	2.6	0.0	12H,	2H,
H18 27	17-674	NORTH BRANCH KOKOSING RIVER	8800	MB	WWH	0.0	0.0	6.20	5.6	12H,16M,	14H,11M, 2M,

Appendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH10 20	17-561	UNNAMED TRIB. TO LITTLE CHIPPEWA CREEK	8800	MB	WWH	0.0	0.0	0.0	2.0	15H,	80H,
OH10 21	17-550	CHIPPEWA CREEK (HEADWATERS TO STEELE DITCH)	8800	EB	MWH	0.0	0.0	0.0	13.9	11H,12M,	76M,71H, 2H,
OH10 26	17-500	TUSCARAWAS RIVER (WOLF CREEK TO CHIPPEWA CREEK)	8800	EB	WWH	0.0	0.0	0.0	7.5	6H,14M,12M,16M, 1M, 3M, M,15	1H,2H,40M,63M ,71M,84M,74M,
OH10 28	17-540	WOLF CREEK	8800	EB	WWH	5.2	0.0	0.00	4.6	1H, 3M,12M,16M,14M , 5S,	1H,2M,40M,63M, 85M,71M,
OH10 30	17-542	VAN HYNING RUN	8800	EB	WWH	0.0	0.0	0.00	0.5	12H, 3M,11M,16M,15S,	2H,40M,71M,80S, M,
OH10 31	17-543	PIGEON CREEK	8800	EB	WWH	0.0	0.0	0.0	8.6	3H,19M,11M, 1M, 12M,16M,	1H,2M,40M,84M, 71M,76S,
OH10 33	17-500	TUSCARAWAS RIVER (HEADWATERS TO WOLF CREEK)	8800	EB	WWH	3.60	0.0	8.10	7.60	12H, 3M,16M, 5M,	40H, 1M,40M,71M,84M,
OH10 33.2	17-545	MYERSVILLE TRIBUTARY	8800	EB	WWH	0.0	0.0	0.00	0.5	12H,16M,	2H,71M,
OH11 1	17-450	SANDY CREEK (NIMISHILLEN CREEK TO TUSCARAWAS R.)	8800	MB	WWH	0.0	0.0	0.0	8.0	5H,11M,	1H,51S,84M,
OH11 5	17-460	NIMISHILLEN CREEK (WEST BRANCH TO SANDY CREEK)	8800	MB	LWH	0.0	0.0	0.0	14.7	12H, 6H, 5H, 3M,	1H, 2S,85H,84H,
OH11 6	17-468	HURFORD RUN	8800	MB	LWH	0.0	0.0	0.00	3.1	3H, 5H, 6H,12M, 14M,16H,	1H,71H,76M,77M ,85H,84H,
OH11 6.1	17-477	DOMER DITCH	8800	MB	WWH	0.0	0.0	0.50	0.1	1H,	1H,
OH11 7	17-461	SHERRICK RUN	8800	MB	WWH	0.0	0.0	0.0	5.0	12H, 5H,	1H, 2H,
OH11 7.1	17-485	TRIB. TO SHERRICK RUN (RM 4.6)	8800	MC	WWH	0.0	0.0	0.00	0.5	1H	2H
OH11 7.2	17-478	OSNABURG DITCH	8800	MB	WWH	0.0	0.0	0.00	0.7	12H, 6H, M,10M,11M,16H,	2H, 1H,51M,71H,
OH11 8	17-464	WEST BRANCH NIMISHILLEN CREEK	8800	MB	WWH	0.0	0.0	0.00	5.9	5H,12H,11H,	1H,40H, H,
OH11 8.1	17-479	MCDOWELL DITCH	8800	MB	WWH	0.0	0.0	0.0	5.0	16H,12M, 5M,11M,	71H,40M, 1M, M,
OH11 8.2	17-480	HOOVER DITCH	8800	MB	WWH	0.0	0.0	0.0	0.5	16H,12M, 5M,	71H, 1M,40H,
OH11 8.3	17-481	ZIMBER DITCH	8800	MB	WWH	3.5	0.0	0.0	0.5	12H, 5M,	1M,40H,
OH11 10	17-462	MIDDLE BRANCH NIMISHILLEN CREEK	8800	MB	WWH	0.0	0.0	12.8	3.8	12H,11H,16S, 5M,	11H,71S,85M,40M,
OH11 10.2	17-482	HARTVILLE DITCH	8800	MB	WWH	0.70	0.0	0.1	2.70	5H,11M,16M,	1H,11M,71M,
OH11 11	17-463	EAST BRANCH NIMISHILLEN CREEK	8800	MB	LWH	4.1	0.0	0.0	6.30	12H, H, 5H, 6M,15S,	1H, 2H,80S,
OH11 11.3	17-483	TRIB. TO EAST BRANCH NIMISHILLEN CREEK	8800	MB	WWH	0.0	0.00	0.00	1.3	19H,16M,	1H,71M,
OH11 12	17-450	SANDY CREEK (L. SANDY CREEK TO NIMISHILLEN CREEK)	8800	MB	WWH	0.0	1.10	0.00	1.10	11H,	51H,
OH12 2	17-101	HUFF RUN	9002	EC	WWH	0.00	0.00	0.00	0.50	10H,	50H,
OH12 13	17-100	CONOTTON CREEK (MCGUIRE CREEK TO INDIAN FORK)	8800	EB	WWH	1.00	0.00	14.10	3.1	1H,12H,	2H,
OH12 23	17-120	IRISH CREEK	8800	MB	WWH	0.30	0.0	7.30	0.0	6H,	90H,
OH12 26	17-124	UNNAMED TRIBUTARY @ JEWETT	8800	EB	WWH	0.0	0.0	0.00	0.5	12H,	2H,
OH12 27	17-123	JEFFERSON CREEK	8800	EC	WWH	0.0	0.0	0.0	4.6	6H,	90H,
OH13 1	17-400	SUGAR CREEK (S. FK. SUGAR CR. TO TUSCARAWAS R.)	9002	MB	WWH	0.00	0.50	0.00	0.70	1H, 5M, 3S,	90H,66S, S,
OH13 14	17-400	SUGAR CREEK (MIDDLE FORK TO SOUTH FORK)	8800	MC	WWH	0.0	0.0	0.00	0.5	H, 5M,	2H,

ppendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
H18 34	17-650	KOKOSING RIVER (HEADWATERS TO N. BR. KOKOSING R.)	8800	MB	EWH-P	0.0	0.0	20.10	0.00	12H,16S,	14H,11M,76S,65S,
H19 1	17-150	KILLBUCK CREEK (DOUGHTY CREEK TO WALHONDING RIVER)	8800	EB	WWH	0.0	0.0	11.2	4.5	12H,	2H,
H19 8	17-150	KILLBUCK CREEK (BLACK CREEK TO DOUGHTY CREEK)	8800	EB	WWH	0.0	0.0	1.1	8.4	12H,	2H,
H19 14	17-150	KILLBUCK CREEK (SAPPS RUN TO BLACK RUN)	8800	EB	WWH	0.9	0.0	5.2	0.0	12H,	2H,
H19 23	17-150	KILLBUCK CREEK (SALT CREEK TO SAPPS RUN)	8800	MB	WWH	4.3	0.0	0.0	2.0	12H,	2H,
H19 31	17-150	KILLBUCK CREEK (APPLE CREEK TO SALT CREEK)	8800	MB	WWH	0.0	0.0	2.6	9.6	12H, 6H,	2H,
H19 35	17-180	SHREVE CREEK	8800	MB	WWH	0.0	0.0	0.00	3.8	12H,15M,	2H,86M, 1M,
H19 36	17-181	APPLE CREEK	8800	EB	WWH	1.50	0.0	2.20	5.00	12H, 5H,	2H,40M,
H19 37	17-182	LITTLE APPLE CREEK	8800	MB	WWH	5.3	0.0	3.1	0.2	12H,	2H,65H,11M,
H19 38	17-150	KILLBUCK CREEK (SHADE CREEK TO APPLE CREEK)	8800	MB	LWH	10.2	0.0	0.0	0.6	12H, 6H,	2H,
H19 47	17-190	CAMEL CREEK	8905	MB	WWH	5.13	0.00	0.00	2.47	12H,16S,	2H,71S,
H20 1	17-001	MUSKINGUM RIVER (WILLS CREEK TO SYMMES CREEK)	9002	MB	WWH	0.60	0.00	1.00	1.00	14H,12M,16S,15S,	1H,86S, 2S,
H20 22	17-001	MUSKINGUM RIVER (TUSC./WALHOND. R. TO WILLS CREEK)	9002	MB	WWH	1.40	0.00	2.80	0.00	12H,14H,15M,	1H, 2S,86M,
H20 28	17-613	LITTLE MILL CREEK	9002	EC	WWH	0.00	0.00	0.00	0.50	10H, 8M,	50H,55M,
H21 1	17-800	WILLS CREEK (WHITE EYES CREEK TO MUSKINGUM RIVER)	9002	MB	WWH	7.10	0.00	0.00	8.00	15H,11M,	74H,51M,52S,
H21 6	17-800	WILLS CREEK (BIRDS RUN TO WHITE EYES CREEK)	8800	MB	WWH	0.0	0.0	0.0	16.3	11H,	51H,
H21 6.1	17-894	TRIB. TO BUFFALO FORK	8800	MB	LRW	0.0	0.0	0.0	2.0	12H,16M,	65H,71M,
H21 14	17-800	WILLS CREEK (SALT FORK TO BIRDS RUN)	8800	MB	WWH	0.0	0.0	0.0	18.8	11H,	51H,
H21 29	17-800	WILLS CREEK (LEATHERWOOD CREEK TO SALT FORK)	8800	MB	WWH	0.0	0.0	0.0	14.80	11H,12M,	51H, 2M,
H21 31	17-830	CROOKED CREEK	8800	MB	WWH	0.0	0.0	0.0	16.5	11H,	51H,
H21 38	17-840	LEATHERWOOD CREEK	8800	MB	WWH	3.10	0.00	7.00	13.00	11H,	51H,
H21 39	17-841	MUD RUN	8800	MB	WWH	0.0	0.0	0.00	2.5	16H,	73H,
H21 40	17-842	HAWKINS RUN	8800	MB	WWH	0.0	0.0	0.0	3.9	11H,	51H,
H21 41	17-843	INFIRMARY RUN	8800	MB	WWH	0.0	0.0	0.0	4.9	11H,16M,	51H,71M,
H21 43	17-800	WILLS CREEK (BUFFALO FORK TO LEATHERWOOD CREEK)	8800	MB	WWH	0.0	0.0	0.0	16.5	11H,12M,	51H, 2M,
H21 46	17-850	SENECA FORK	8800	MB	WWH	0.0	0.0	0.0	30.3	11M,15H,12M,	51M,74H,73M,65M,
H21 63	17-872	YOKER CREEK	8800	MB	WWH-P	1.00	0.0	2.00	1.90	11H,	51H,
H21 69	17-878	COLLINS FORK	8800	MB	WWH-P	0.0	0.0	0.0	5.3	11S,13M,	51H,55M,
H22 5	17-200	LICKING RIVER (ROCKY FORK TO DILLON RESERVOIR)	8800	EB	WWH	0.0	0.0	2.3	13.2	5M,12H, 1S,	2H, 1M,
H22 16	17-200	LICKING RIVER (NORTH/SOUTH FORKS TO ROCKY FORK)	8800	MB	WWH	1.7	0.0	6.8	0.0	2H,	2H,
H22 23	17-250	NORTH FORK (SYCAMORE CREEK TO S. FK. LICKING R.)	8800	MB	WWH	6.5	0.0	12.8	1.0	12H,	2H, 1M,
H22 37	17-250	NORTH FORK LICKING R. (HEADWATERS TO SYCAMORE CR.)	8800	MB	WWH	17.7	0.0	0.0	0.4	15H,	80H,
H22 45	17-220	S. FK. LICKING R. (BUCKEYE LK OUTLET TO LICKING R)	8800	MB	WWH	0.0	0.00	8.90	3.90	12H,	2H,
H22 46	17-221	RACCOON CREEK	8800	MB	WWH	0.00	18.50	0.0	9.0	12H,	2H,
H22 48	17-223	LOBDELL CREEK	9002	MB	WWH	0.00	0.00	0.50	0.00	12H,16H,	71H,

Appendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH22 58	17-233	BEAVER RUN	8800	BC	WWH	0.0	0.0	0.00	0.5	5H,	1H,
OH22 59	17-220	S. FK. LICKING R(TRIB@ 23.25 TO BUCKEYE LK OUTLET)	9002	MB	WWH	0.00	7.10	3.30	0.00	12H,16M,	2H,71M,
OH22 59.1	17-237	WASTEWEIR RUN	8800	MB	WWH	0.0	0.0	0.0	2.0	12H,15M,16M,	2H,74M,71M,
OH22 61	17-220	S. FK. LICKING R. (HEADWATERS TO TRIB. @ 23.25)	8800	MB	WWH	4.80	0.60	4.30	0.0	12H,	2H,
OH23 16	17-914	BRUSH CREEK	9002	BC	WWH	0.00	0.00	0.00	0.50	10H,	50H,
OH23 22	17-310	JONATHAN CREEK (BUCKEYE FORK TO MOXAHALA CREEK)	8800	BC	LWH	0.0	0.0	0.0	4.9	10H,11M,	51H,11S,55S,65S,
OH23 27	17-310	JONATHAN CREEK (HEADWATERS TO BUCKEYE FORK)	8800	MB	EWH	0.0	0.0	11.30	1.0	11H,	51H,
OH23 28	17-315	BUCKEYE FORK	9002	MC	LRW	0.00	0.00	0.00	9.90	10H,	50H,
OH23 36	17-300	MOXAHALA CREEK (HEADWATERS TO JONATHAN CREEK)	9002	MC	LRW	0.00	0.00	0.00	25.70	10H,	50H,
OH23 39	17-304	ELK RUN	8800	BC	WWH	0.0	0.0	0.0	3.6	10H,11M,	51H,
OH23 43	17-308	BLACK FORK	8800	MB	WWH-P	0.00	1.30	0.0	6.40	10H,11M,	51H,
OH23 43.1	17-325	OGG CREEK	8800	MB	WWH-P	0.0	0.40	0.00	0.30	10H,11M,	51H,73M,
OH23 45	17-323	MCLUNEY CREEK	9002	BC	LRW	0.00	0.00	0.00	0.50	10H,	50H,
OH23 48	17-001	MUSKINGUM RIVER (SYMMES CREEK TO LICKING RIVER)	9002	MB	WWH	8.50	0.00	2.40	0.00	14H,12M,16S,	1H,86S,
OH24 1	17-001	MUSKINGUM RIVER (BIG RUN TO OHIO RIVER)	9002	MB	WWH	14.00	0.00	3.20	0.00	14H,	1H,86S,
OH24 17	17-001	MUSKINGUM RIVER (MEIGS CREEK TO BIG RUN)	9002	MB	WWH	0.00	0.00	8.10	0.50	14H,	1H,86S,
OH24 27	17-035	SOUTH BRANCH WOLF CREEK	8800	MB	EWH	1.10	0.0	0.10	0.00	12H,	90H,
OH24 36	17-044	WEST BR. WOLF CREEK (LAUREL RUN TO MUSKINGUM R.)	8800	MB	EWH	0.0	0.0	12.90	0.00	12H,11H,	90H,
OH24 40	17-044	WEST BR. WOLF CREEK (HEADWATERS TO LAUREL RUN)	8800	MB	EWH	1.00	0.0	0.10	0.9	12H,11H,	90H,
OH24 61	17-070	OLIVE GREEN CREEK	8800	MB	EWH	0.50	0.0	0.50	0.5	15H,	80H,55S,
OH24 92	17-001	MUSKINGUM RIVER (MILLERS RUN TO MEIGS CREEK)	9002	MB	WWH	0.00	7.00	12.00	1.60	5H, 3H,	1H,
OH24106	17-001	MUSKINGUM RIVER (SALT CREEK TO MILLERS RUN)	9002	MB	WWH	5.00	0.00	6.60	1.10	22H, 5H, 3H,	90H, 1H,
OH25 1	01-001	HOCKING RIVER (RUSH CREEK TO CLEAR CREEK)	8800	EB	WWH	0.0	0.0	0.0	8.2	12H,10M,11S,	2H,51M,71S,
OH25 2	01-042	BUCK RUN	8800	BC	WWH	0.0	0.0	0.50	0.0	5A,	1H,
OH25 4	01-400	CLEAR CREEK	8905	MB	WWH	0.00	2.30	17.60	0.10	16H,12H,11S,	71H,86H,65H,
OH25 4.1	01-441	DACE DITCH (AMANDA)	8905	MB	WWH	0.00	0.00	0.00	1.00	16H,14M,	71H,86M, 1S, 2S,
OH25 4.2	01-440	AMANDA CREEK	8905	MB	WWH	0.00	0.00	0.00	1.00	16H,	71H, 1S, 2S,
OH25 8	01-430	DUNKLE RUN	8800	EB	WWH	0.0	0.0	0.00	0.5	11H, 1S,	11H,
OH25 12	01-500	RUSH CREEK (LITTLE RUSH CREEK TO HOCKING RIVER)	8800	EB	LRW	0.0	0.0	8.90	7.80	12H, 6M,10M,16M,11S,	2H,51M,71S,
OH25 13	01-510	DURBIN RUN	8800	EB	WWH	0.0	0.0	0.0	3.2	11H,16M,15S,	71H,74S,
OH25 15	01-530	RACCOON RUN	8800	EB	WWH	0.0	0.0	0.0	8.0	16H,11S,	71H,11S,
OH25 16	01-540	LITTLE RUSH CREEK	8800	EB	WWH	0.0	0.0	0.00	2.4	19H,11S,	55H,11M,14S,51S,65S,
OH25 20	01-500	RUSH CREEK (HEADWATERS TO LITTLE RUSH CREEK)	8800	EB	LRW	0.0	0.0	0.0	13.3	10H,16M,11M, 5S,	51H,71M,11S,
OH25 20.1	01-501	BLUNTNOSE CREEK (TRIB. TO RUSH CREEK)	8800	EB	WWH	0.0	0.0	0.0	1.0	11H,16S,12M,	11H,71M,
OH25 21	01-550	CENTER BRANCH RUSH CREEK	8800	EB	WWH	0.0	0.0	0.00	1.5	16H,11M,10S,	71H,55M,51S,

Appendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH25 22	01-560	TURKEY RUN	8800	EB	LRW	0.0	0.0	0.0	4.5	16H,15M,11M,	80H,71M,51S,
OH25 23	01-001	HOCKING RIVER (HEADWATERS TO RUSH CREEK)	8800	EB	WWH	0.0	0.0	0.40	14.20	12H, 3H, 1M,16S, 5M,	2H,2M,40M ,71S,11S,65S,
OH25 25	01-046	BALDWIN RUN	8800	EB	WWH	0.0	0.0	0.00	0.5	12H,16M, 3M,11S,	40H,71M, 1M,40S,
OH25 27	01-048	HUNTERS RUN	8800	EB	WWH	0.0	0.0	0.00	1.1	6H, 3M,16M, 1S,	1H,40M,71M,40S,
OH26 8	01-200	SUNDAY CREEK (W. BR. SUNDAY CR. TO HOCKING R.)	8800	EC	LRW	0.0	0.0	0.0	13.1	10H,11M,	51H,52M,
OH26 25	01-300	MONDAY CREEK	9002	MC	LRW	0.00	0.00	0.00	0.50	10H,11H,	50H,
OH26 26	01-310	SNOW FORK	9002	EC	LRW	0.00	0.00	0.00	0.50	10H,	50H,
OH26 42	01-036	OLDTOWN CREEK	8800	MC	WWH	0.0	0.0	0.00	0.5	12H, 5M,	1H,
OH26 43	01-037	SCOTT CREEK	8800	EB	WWH	0.7	0.0	0.0	8.3	10H,11H,	51H,
OH27 28	01-170	MCDOUGALL BRANCH	8800	MB	EWH	0.0	0.0	0.00	0.5	11H,15S,12M,	11H,73S,
OH27 39	01-001	HOCKING RIVER (ATHENS TO FEDERAL CREEK)	9002	MB	WWH	0.00	0.00	3.50	1.00	16H,22H,	71H, 4M,
OH28 30	09-600	SHADE RIVER	8800	MB	EWH	0.0	0.0	0.0	18.2	11H,16M,	51H,
OH29 7	09-038	PAINT CREEK	8800	MB	WWH	0.0	0.0	0.00	3.2	12H,16M,	2H,71M,
OH29 19	09-057	KYGER CREEK	8800	EB	LRW	0.0	0.0	0.0	11.80	10H, 5H,11H,16M,	51H, 1M,86S,
OH29 22	09-060	STINGY RUN	8800	EB	LRW	0.0	0.0	0.0	2.4	5H,	1H,
OH29 24	09-062	BELL LICK RUN	8800	EB	WWH	0.0	0.0	0.00	0.50	11M,16H,15H,	71H,11M,80M,
OH29 35	09-200	LEADING CREEK (DEXTER RUN TO LITTLE LEADING CREEK)	8800	MB	WWH	0.0	0.00	0.0	10.0	15H,	86H,
OH29 39	09-200	LEADING CREEK (HEADWATERS TO DEXTER RUN)	8800	MB	WWH	0.0	0.00	0.0	11.0	15H,	80H,
OH30 1	09-510	LITTLE RACCOON CREEK (DICKASON RUN TO RACCOON CR.)	8800	MB	LRW	0.0	0.0	0.0	12.6	10H, 5M,	51H,
OH30 5	09-514	DICKASON RUN	9002	EC	LWH	0.00	0.00	0.00	0.50	10H,	50H,
OH30 7	09-510	LITTLE RACCOON CREEK (SAND RUN TO DICKASON RUN)	8800	MB	LRW	0.0	0.0	0.0	12.6	12H,10H, 5M,11S,	2H,85M,51H,52M,
OH30 9	09-517	GOOSE RUN	9002	EC	LWH	0.00	0.00	0.00	1.50	10H,	50H,
OH30 12	09-520	FLINT RUN	9002	MC	LWH	0.00	0.00	0.00	2.20	10H,	50H,
OH30 15	09-523	MULGA RUN	9002	EC	LRW	0.00	0.00	0.00	4.70	10H,	50H,
OH30 16	09-524	MEADOW RUN	8800	MB	WWH	0.0	0.00	0.0	4.6	10H,12H, 5M, 6M,	2H,51H,52M,85M,
OH30 17	09-510	LITTLE RACCOON CREEK (HEADWATERS TO SAND RUN)	8800	MB	WWH	0.0	0.0	0.00	5.0	10H, 5M,15M,	51M,80M,
OH30 17.1	09-582	SUGAR RUN	8800	MC	WWH	0.0	0.0	0.00	1.6	10H, 5M,	51H,
OH30 18	09-525	SAND RUN	8800	MB	WWH	0.0	0.0	0.0	4.3	11H,12M,	14H,11H,16S,
OH30 35	09-530	ELK FORK	8800	EB	LRW	0.0	0.0	4.2	14.4	10H, 5H,12M, 9M,11H,	51H, 1M, 2M,
OH30 38	09-533	WOLF RUN	8800	EB	LRW	0.0	0.0	0.0	7.1	10H, 5H,	51H,
OH30 39	09-534	PUNCHEON FORK	8800	EB	LRW	0.0	0.0	0.0	5.6	10H, 5M,	51H,57H,
OH30 40	09-578	AUSTIN POWDER TRIB.	8800	EB	LRW	0.0	0.0	0.0	4.0	H, 9M, 6M, 5M,15H,	1H,51S,80M,
OH30 41	09-500	RACCOON CREEK (HEWETT FORK TO ELK FORK)	9002	MC	LRW	0.00	0.00	0.00	0.50	10H,	50H,
OH30 50	09-563	HEWETT FORK	9002	MC	LWH	0.00	0.00	0.00	15.40	10H,	50H,

Appendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH30 50.1	09-586	CARBONDALE CREEK	9002	EC	WWH	0.00	0.00	0.00	0.50	10H,	50H,
OH30 56	09-568	SANDY RUN	9002	EC	WWH	0.00	0.00	0.00	3.80	10H,	50H,
OH30 56.1	09-583	BIG FOUR HOLLOW (LAKE HOPE)	9002	EC	LWH	0.00	0.00	0.00	1.40	10H,	50H,
OH30 59	09-571	BRUSHY FORK	9002	EC	EWH	0.00	0.00	0.00	10.80	10H,	50H,
OH30 60	09-500	RACCOON CREEK (EAST/WEST BRANCH TO BRUSHY FORK)	9002	MC	LRW	0.00	0.00	0.00	8.90	10H,	50H,
OH30 63	09-574	EAST BRANCH RACCOON CREEK	9002	MC	LRW	0.00	0.00	0.00	7.70	10H,	50H,
OH30 63.1	09-587	TRIB. TO E. BR. RACCOON CREEK (RM 5.6)	9002	EC	LWH	0.00	0.00	0.00	0.30	10H,	50H,
OH31 49	09-500	RACCOON CREEK (LITTLE RACCOON CREEK TO RYAN RUN)	8800	EC	LRW	0.0	0.00	4.3	5.5	10H, 5M,11M,	51H,
OH31 50	09-539	INDIAN CREEK	8800	MB	WWH	0.0	0.0	0.00	1.5	12H,	2H,
OH32 35	09-730	BLACK FORK	8800	MB	WWH	0.0	0.0	0.00	6.4	12H,	2H,
OH32 40	09-735	HUNTINGCAMP CREEK	8800	MB	WWH	0.0	0.0	0.0	3.4	12H,16M,	2H,71M,
OH33 3	09-300	LITTLE SCIOTO RIVER (ROCKY FORK TO OHIO RIVER)	8800	EB	EWH	0.0	0.0	18.3	0.0	15H,	80H,
OH33 61	09-400	PINE CREEK (HALES CREEK TO LITTLE PINE CREEK)	8800	EB	WWH	0.0	0.0	6.50	0.0	11H,	51H,
OH33 74	09-422	PAINTER CREEK	8800	EC	WWH	0.0	0.0	2.3	0.0	6H,	90H,
OH34 1	02-158	LITTLE SCIOTO RIVER (ROCK FORK TO SCIOTO RIVER)	8800	MB	WWH	0.00	0.0	1.4	9.00	1H,19H, 3H,11M,	2H, 1H,85H,71M,
OH34 1.1	02-236	ROCKSWALE DITCH	8800	MB	LRW	0.0	0.0	0.0	3.0	5H,19H, 1H,	1H,
OH34 1.2	02-235	COLUMBIA DITCH	8800	MB	MWH-P	0.0	0.0	0.0	2.0	12H, 5H,16M,	1H,73M,
OH34 2	02-159	HONEY CREEK	8800	MB	WWH	0.0	0.0	0.50	0.70	6H,	11S,14S,
OH34 3	02-158	LITTLE SCIOTO RIVER (HEADWATERS TO ROCK FORK)	8800	EB	WWH	0.0	0.0	0.80	0.0	11H,12H,15H,	11H,14H,80H,
OH34 5	02-001	SCIOTO RIVER (RUSH CREEK TO LITTLE SCIOTO RIVER)	8800	MB	WWH	0.0	0.0	12.2	0.0	12H,	11H,14S,
OH34 8	02-165	RUSH CREEK	8800	MB	WWH	1.10	0.0	7.20	0.0	6H,	11S,14S,
OH34 13	02-001	SCIOTO RIVER (PANTHER CREEK TO RUSH CREEK)	8800	MB	WWH	0.0	0.0	14.0	0.0	12H,	11H,14S,
OH34 17	02-001	SCIOTO RIVER (SILVER CREEK TO PANTHER CREEK)	8800	EB	WWH	0.0	0.0	1.50	8.00	12H, 5M, 1M,	2H, 2M,40M,
OH34 24	02-001	SCIOTO RIVER (HEADWATERS TO SILVER CREEK)	8800	MB	WWH	0.0	0.0	3.60	8.4	12H,16M,	2H,71M,11S,14S,
OH34 25	02-181	TAYLOR CREEK	8800	MB	WWH	5.7	0.0	0.0	1.4	12H,	1H,
OH34 32	02-188	COTTONWOOD DITCH	8800	MB	WWH	0.0	0.0	0.0	7.0	16H,12H,	71H, 2H,
OH35 1	02-109	MILL CREEK (OTTER RUN TO SCIOTO RIVER)	8800	MB	WWH	0.00	4.00	11.90	5.00	12H, 5H, 6H, M,	1H, 2M,40M,40S,
OH35 1.1	02-239	TOWN RUN	8800	EC	WWH	0.0	0.0	0.00	0.5	5H,	40H, 1M,
OH35 2	02-126	BLUES CREEK	8800	EC	WWH	0.0	0.0	0.50	0.0	5H,	65S,
OH35 8	02-133	CROSSES RUN	8800	MB	WWH	0.0	0.0	0.0	1.9	6H, H, 5M, 2H,	1H,13S,
OH35 12	02-001	SCIOTO RIVER (BOKES CREEK TO MILL CREEK)	8800	EB	WWH	0.0	0.0	6.5	0.0	12H,	11H,14S,
OH35 18	02-138	BOKES CREEK (HEADWATERS TO BRUSH RUN)	8800	EB	WWH	0.0	0.0	0.00	14.3	6H,12H,11M,	65H, 2H,14M,11S,
OH35 19	02-144	POWDERLICK RUN	9002	MB	WWH	0.00	0.00	0.00	5.10	12H,16M, 9H,	11H,71M,
OH35 21	02-194	W. FK. WEST MANSFIELD TRIB.	8800	EB	WWH	0.0	0.0	0.0	3.0	12H,16H,	14H,
OH35 22	02-195	E. FK. WEST MANSFIELD TRIB.	8800	EB	WWH	0.0	0.0	0.00	1.0	12H,16M,	65H,14M,11S,

ppendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
)H35 24	02-001	SCIOTO RIVER (FULTON CREEK TO BOKES CREEK)	8800	EB	WWH	0.0	0.0	3.6	0.0	12H,.	11H,
)H35 25	02-145	FULTON CREEK	8800	MB	WWH	7.9	0.0	3.7	5.0	12H,	2H,
)H35 25.1	02-233	TRIB. TO FULTON CREEK	8800	MB	WWH	0.0	0.0	0.00	0.2	12H, 5H,	4H,40H,
)H35 27	02-001	SCIOTO RIVER (LITTLE SCIOTO RIVER TO FULTON CREEK)	8800	MB	WWH	0.0	0.0	5.3	6.6	3H, 1M,12M,16S,11M,	66H, 1M, 2M,73S,10S,
)H36 1	02-400	OLENTANGY RIVER (WHETSTONE CREEK TO DELAWARE RUN)	9002	MB	WWH	1.10	0.00	2.50	0.70	15H,16M,12S,	74H,73H,
)H36 11	02-453	SHAW CREEK	8800	MB	WWH	0.0	0.0	0.00	0.5	11H,	11H,14S,55S,
)H36 12	02-450	WHETSTONE CREEK (HEADWATERS TO SHAW CREEK)	8800	MB	WWH	7.4	0.0	5.50	0.70	12H, 6H, M, 8S,	2H,55S,65S,
)H36 35	02-400	OLENTANGY RIVER (HEADWATERS TO MUD RUN)	8800	MB	WWH	2.8	0.0	0.00	6.0	12H, 6H, 5H,	2H, 2H,40H,
)H37 1	02-001	SCIOTO RIVER (SCIOTO BIG RUN TO BIG WALNUT CREEK)	9002	MB	EWH-P	1.70	0.00	5.50	0.00	12H,	2H,
)H37 9	02-400	OLENTANGY RIVER (BARTHOLOMEW RUN TO SCIOTO RIVER)	9002	MB	EWH-P	0.00	0.80	6.10	3.40	12H,16M,15M,	42H,73H,43M, 1S,
)H37 13	02-400	OLENTANGY RIVER (DELAWARE RUN TO BARTHOLOMEW RUN)	9002	MB	EWH-P	0.00	1.30	4.00	0.00	9H,12H,	2H,65S,43S,
)H37 19	02-001	SCIOTO RIVER (INDIAN RUN TO OLENTANGY RIVER)	8800	MB	WWH	3.8	0.0	5.2	3.8	16H, 9M,15S,	73H,11M,74M,
)H37 19.1	02-238	INDIAN RUN	8800	MC	WWH	0.0	0.0	0.50	0.0	5H,	90H,
)H37 25	02-001	SCIOTO RIVER (MILL CREEK TO INDIAN RUN)	8800	EB	WWH	0.0	0.0	0.0	10.2	16H,	73H,
)H37 27	02-108	EVERSOLE RUN	8800	EB	WWH	0.0	0.0	1.50	0.0	16H,	73H,65S,32S,
)H38 1	02-100	BIG WALNUT CREEK (ALUM/BLACKLICK CR. TO SCIOTO R.)	8800	MB	WWH	3.6	0.0	0.60	1.90	12H, 6M, 5S,	2H,40S,32S,
)H38 2	02-110	ALUM CREEK (COLUMBUS BOUNDARY TO BIG WALNUT CREEK)	8800	MB	WWH	0.0	0.0	8.4	11.5	12H, M,15M,11S,	2H,40H,40S,74M,32S,
)H38 17	02-130	BLACKLICK CREEK	8800	MB	WWH	4.80	0.0	2.40	2.10	12H, 6H, M,	2H,40M,32S,40S,
)H38 28	02-100	BIG WALNUT CREEK (CULVER CREEK TO L. WALNUT CR.)	8800	EB	WWH	3.0	0.0	0.0	3.4	12H,	2H,65S,
)H38 29	02-125	PRAIRIE RUN	8800	EB	WWH	0.0	0.0	0.00	2.0	12H, 6H, M,	2H, 1M,40M,40S,64S,
)H38 39	02-103	LONG RUN	8800	MB	WWH	0.0	0.0	4.3	2.1	12H,16S,	16H,71S,
)H38 40	02-100	BIG WALNUT CREEK (HEADWATERS TO REYNOLDS RUN)	9002	MB	WWH	0.00	0.00	0.00	5.00	15H,12S,	87H,65S,
)H39 1	02-200	BIG DARBY CREEK (DARBYVILLE TO SCIOTO RIVER)	8800	EB	EWH	0.00	3.70	4.50	3.80	12H,	1H,11M,
)H39 7	02-200	BIG DARBY CREEK (L. DARBY CREEK TO HELLBRANCH RUN)	8800	EB	EWH	4.1	0.0	4.3	0.0	12H,	2H,11M,65S,
)H39 8	02-210	LITTLE DARBY CREEK (SPRING FORK TO BIG DARBY CR.)	8800	MB	EWH	0.0	0.0	3.5	4.0	12H,	2H,40M,65S,
)H39 10	02-210	LITTLE DARBY CREEK (TREACLE CREEK TO SPRING FORK)	8800	EB	EWH	0.0	0.00	8.00	0.0	6H,	11S,
)H39 15	02-210	LITTLE DARBY CREEK (HEADWATERS TO TREACLE CREEK)	8800	MB	EWH	0.0	0.0	0.00	0.5	12H,	2H,11S,
)H39 19	02-200	BIG DARBY CREEK (FITZGERALD DITCH TO L. DARBY CR.)	8800	EB	EWH	0.0	0.0	5.7	5.2	12H, 5S,16M,11S,	2H,73M,51S,
)H39 21	02-200	BIG DARBY CREEK (SUGAR RUN TO FITZGERALD DITCH)	8800	MB	EWH	0.0	0.00	5.9	0.0	12H, 5H,11S,	2H, 1H,11S,
)H39 22	02-200	BIG DARBY CREEK (BUCK RUN TO SUGAR RUN)	8800	MB	EWH	0.00	9.60	2.80	0.40	5H,12H,11S,	1H, 2H,11S,14S,40S,
)H39 23	02-206	SUGAR RUN	8800	EB	WWH	0.0	0.0	0.00	1.0	12H,11M,	14H,11S,
)H39 27	02-209	BUCK RUN	8800	EB	WWH	0.0	0.00	0.20	6.60	12H,11M,16H,	14H,77H,
)H39 31	02-200	BIG DARBY CREEK (HEADWATERS TO SPAIN CREEK)	9002	MB	EWH	0.00	3.90	6.80	0.00	11H,	31H,
)H39 31.2	02-251	LITTLE DARBY CREEK	9002	MB	WWH	0.00	0.50	5.50	0.00	16H,	71H,
)H39 33	02-223	FLAT BRANCH	9002	MB	WWH	0.00	0.00	0.00	4.70	16H,11M,	71H,31M,11S,

Appendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH40 9	02-078	WALNUT CREEK (GEORGE CREEK TO LITTLE WALNUT CREEK)	8800	EB	WWH	15.00	0.0	0.70	0.0	12H,	2H,11S,
OH40 12	02-084	GEORGES CREEK	8800	MB	WWH	0.0	0.0	0.00	1.8	12H,	2H,65S,
OH40 12.1	02-231	TRIB. TO GEORGES CREEK	8800	MB	WWH	0.0	0.0	0.80	5.10	12H,	2H,
OH40 14	02-226	TUSSING DITCH	8800	MB	WWH	0.0	0.0	0.0	8.0	16H, 5M,	71H, 1M,
OH40 15	02-085	SYCAMORE CREEK	8800	MB	WWH	2.7	0.0	0.50	1.5	12H, 6M,	2H,65S,
OH40 16	02-078	WALNUT CREEK (PAWPAW CREEK TO SYCAMORE CREEK)	8800	EB	WWH	0.50	0.0	4.80	6.90	12H, 3M,	1H, 2M,
OH40 19	02-087	PAWPAW CREEK	8800	EB	WWH	0.0	0.0	0.00	0.9	12H, 1M,	1H,40M,
OH40 20	02-224	ZELLERBACH TRIB.	8800	EB	WWH	0.0	0.0	0.00	0.5	15H,	80H,
OH40 21	02-078	WALNUT CREEK (HEADWATERS TO PAWPAW CREEK)	8800	EB	WWH	0.0	0.0	5.70	0.0	12H,	2H,11S,
OH40 22	02-225	PLEASANTVILLE-THURSTON WWTP TRIB.	8800	EB	WWH	0.0	0.0	0.00	1.0	16H,	71H,
OH40 23	02-001	SCIOTO RIVER (BIG WALNUT CREEK TO WALNUT CREEK)	9002	MB	EWH-P	0.00	5.30	5.80	0.00	16H,11M,12M,	76H,11M, 2M
OH41 1	02-001	SCIOTO RIVER (KINNIKINNICK CREEK TO PAINT CREEK)	9002	MB	EWH-P	0.00	2.10	17.40	0.00	16H,11M,12M,	76H,11M, 2M,
OH41 6	02-001	SCIOTO RIVER (SCIPPO CREEK TO KINNIKINNICK CREEK)	9002	MB	EWH-P	0.00	0.00	6.60	0.00	16H,11M,	76H,11M,
OH41 6.1	02-196	BLACKWATER CREEK	8905	MB	WWH	0.00	0.00	0.00	6.00	22H,15M,12S,	90H,86M,
OH41 9	02-302	HAY RUN	8800	MB	WWH	4.9	0.0	0.5	2.1	12H,	2H,
OH41 18	02-300	DEER CREEK (BRADFORD/SUGAR CREEK TO DEER CR. RES.)	8800	MB	WWH	2.80	0.00	3.10	5.90	11H, 5S,	11H,14M, 2M,
OH41 26	02-300	DEER CREEK (OAK RUN TO BRADFORD CREEK)	8800	MB	WWH	2.90	0.0	1.10	5.00	11H,	11H,14M,
OH41 28	02-316	OAK RUN	8800	MB	WWH	1.6	0.0	2.3	12.1	12H, 5S, 2S,	2H,17S,84S,
OH41 28.1	02-320	JONES DITCH	8800	MC	WWH	0.0	0.0	0.0	2.0	12H,	90H,
OH41 30.1	02-322	CHILDRENS HOME DITCH	9002	MB	WWH	0.00	2.40	0.50	0.00	12H,	2H,
OH41 33	02-001	SCIOTO RIVER (BIG DARBY CREEK TO SCIPPO CREEK)	9002	MB	EWH-P	0.00	9.50	1.70	0.00	16H,11M,	76H,11M,
OH41 34	02-069	SCIPPO CREEK	8800	MB	WWH	2.90	0.0	0.30	0.0	3H,	1H,
OH42 15	02-550	RATTLESNAKE CREEK (WEST BRANCH TO LEES CREEK)	8800	MB	EWH	1.10	0.0	6.00	0.0	6H,	11S,14S,65S,
OH42 16	02-562	WEST BRANCH RATTLESNAKE CREEK	8800	MB	WWH	0.0	0.00	0.00	5.0	16H,	71H,
OH42 18	02-563	WILSON CREEK	8800	MB	WWH	0.0	0.0	0.00	1.9	12H, 6H,	2H,
OH42 30	02-579	SUGAR CREEK	8800	MB	WWH	0.0	0.0	0.00	3.0	16H,	71H,
OH42 31	02-500	PAINT CREEK (E. FK. PAINT CREEK TO SUGAR CREEK)	9003	MB	EWH-P	0.10	0.00	8.30	0.00	12H,	2H,
OH42 35	02-500	PAINT CREEK (JEFFERSONVILLE TO E. FK. PAINT CREEK)	9003	MB	WWH	0.10	0.00	4.80	0.00	22H,16M,12M, 5S,	90H,71M, 2M,85S,
OH43 1	02-500	PAINT CREEK (N. FK. PAINT CREEK TO SCIOTO RIVER)	8800	MB	WWH	0.00	4.80	0.0	3.3	1M, 5M, 3M,12H,	1H,
OH43 20	02-500	PAINT CREEK (LOWER TWIN CR. TO N. FK. PAINT CR.)	8800	EC	EWH	0.0	0.0	0.50	0.0	6H,	90H,
OH43 49	02-540	CLEAR CREEK	8800	MB	EWH	6.40	0.0	3.40	3.50	12H, 5M,	2H,
OH43 49.2	02-587	LITTLE ROCK CREEK	8800	MC	WWH	0.0	0.0	0.00	0.5	12H,	90H,
OH43 49.5	02-586	WEST FORK CLEAR CREEK	8800	EB	WWH	0.0	0.0	0.00	0.5	12H,	90H,
OH43 51	02-530	ROCKY FORK (HEADWATERS TO ROCKY FORK LAKE)	8800	MB	EWH	1.90	0.0	3.10	3.10	16H,	73H,
OH44 3	02-610	LITTLE SALT CREEK (BUCKEYE CREEK TO SALT CREEK)	8800	MB	WWH	0.0	0.0	1.50	18.6	12H,	2H,55S,

Appendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH44 4	02-611	MIDDLE FORK SALT CREEK (PIGEON CR. TO L. SALT CR.)	9002	MB	WWH	0.00	0.50	0.50	0.00	11H,22M,	51H,
OH44 5	02-612	PIGEON CREEK (HEADWATERS TO MIDDLE FORK)	8800	MB	WWH	0.0	0.0	0.00	4.2	6H,12H,	2H,65S,55S,
OH44 8	02-611	MIDDLE FORK SALT CREEK (HEADWATERS TO PIGEON CR.)	9002	MB	WWH	6.90	0.00	10.20	0.00	11H,22M,	51H,
OH44 16	02-610	LITTLE SALT CREEK (HEADWATERS TO BUCKEYE CREEK)	8800	MB	WWH-P	0.0	0.0	0.0	7.3	11H,12H, 6H, 5H,	2H,11H,14H,
OH44 17	02-622	BUCKEYE CREEK	8800	MB	WWH	0.0	0.0	0.0	7.7	11H,	55S,11S,14S,
OH44 18	02-623	FOURMILE CREEK	8800	MB	WWH-P	0.0	0.0	0.0	6.5	15H,	80H,
OH45 1	02-800	SUNFISH CREEK (CHENOWETH FORK TO SCIOTO RIVER)	8800	EB	WWH	7.5	0.0	0.0	1.0	16H,	80H,55S,
OH45 11	02-809	MORGAN FORK	8800	EC	WWH	0.0	0.0	0.00	0.5	5H,	55S,
OH45 14	02-800	SUNFISH CREEK (HEADWATERS TO MORGAN FORK)	8800	EC	WWH	0.0	0.0	0.00	0.5	5H,	55S,
OH45 20	02-022	BIG BEAVER CREEK	8800	MB	WWH	1.90	0.0	21.30	0.0	6H,	51S,55S,
OH45 29	02-001	SCIOTO RIVER (PEEPEE CREEK TO SUNFISH CREEK)	8800	MB	WWH	0.0	0.0	11.20	0.0	12H, 1M,	1H,
OH45 34	02-035	PEEPEE CREEK	8800	EB	WWH	0.0	0.0	0.00	0.5	6H,	10S,40S,20S,
OH45 44	02-001	SCIOTO RIVER (SALT CREEK TO PEEPEE CREEK)	8800	MB	WWH	1.9	0.0	11.2	0.0	12H, 1S,	1H,85S,
OH45 56	02-001	SCIOTO RIVER (PAINT CREEK TO SALT CREEK)	8800	MB	WWH	7.3	0.0	5.0	0.0	12H, 1S,	1H,85S,
OH46 1	02-001	SCIOTO RIVER (SCIOTO BRUSH CREEK TO OHIO RIVER)	8800	MB	WWH	4.6	0.0	3.4	1.2	12H,	1H,
OH46 7	02-700	SCIOTO BRUSH CREEK (MCCULLOUGH CREEK TO SCIOTO R.)	8800	EB	EWH	0.0	0.0	0.0	0.9	6H,	10S,51S,55S,
OH46 23	02-710	S FK SCIOTO BRUSH (SHAWNEE CR. TO SCIOTO BRUSH CR)	8800	MB	EWH	0.0	7.30	1.00	0.0	6H,	51S,55S,
OH46 36	02-722	TURKEY RUN	8800	EC	EWH	0.0	0.0	0.00	0.5	5H,	51S,55S,11S,
OH46 42	02-728	MILL CREEK	8800	EC	EWH	0.0	0.0	0.00	0.5	5H,	51S,55S,11S,
OH46 63	02-700	SCIOTO BRUSH CREEK (RARDEN CREEK TO SOUTH FORK)	8800	EC	EWH	0.0	0.0	0.00	0.5	5H,	51S,55S,11S,
OH46 84	02-001	SCIOTO RIVER (SUNFISH CREEK TO SCIOTO BRUSH CREEK)	8800	MB	WWH	0.0	0.0	17.6	0.0	12H, 1M,	1M,
OH47 27	10-100	EAGLE CREEK(E/N FORK EAGLE CREEK TO OHIO RIVER)	8800	EB	WWH	0.0	0.0	7.1	7.40	15H,11M,	86H,11M,12M,
OH47115	10-508	TURKEY CREEK	8800	EB	WWH	0.0	0.0	13.4	0.0	5H,	83H,
OH48 1	10-200	OHIO BRUSH CREEK (SEMPLE CREEK TO OHIO RIVER)	8800	MB	EWH	0.0	0.0	8.4	5.7	15H,16H,11M,12M,	74H,86H,11M,16S,
OH48 6	10-205	BEASLEY FORK	8800	MB	WWH	0.00	1.80	0.0	5.2	12H,15H,	2H,80H,
OH48 11	10-200	OHIO BRUSH CREEK (WEST FORK TO SEMPLE CREEK)	8800	MB	EWH	0.0	0.0	14.6	0.0	15H,11M,	86H,11M,16S,
OH48 13	10-211	LICK CREEK	8800	EB	EWH	2.80	0.0	0.0	4.80	15H,	80H,
OH48 16	10-215	LOUISE TRIBUTARY	8800	EB	EWH	0.0	0.0	0.0	4.0	15H,	80H,
OH48 18	10-220	WEST FORK (BUCK RUN TO OHIO BRUSH CREEK)	8800	MB	EWH	2.9	0.0	1.1	5.0	15H,12H,11M,	2H,86H,11M,
OH48 18.1	10-250	TRIB. TO W. FK. OHIO BRUSH CR. (SEAMAN)	8800	MC	WWH	0.0	0.0	0.00	0.5	6H, 9H,	2H,
OH48 22	10-224	CHERRY FORK	8800	MB	WWH	0.0	0.0	10.3	0.0	15H,11M,	80H,11M,14M,16S,
OH48 29	10-230	ELK FORK	8800	MB	WWH	0.0	0.0	0.0	4.5	12H,	2H,14H,
OH48 32	10-248	SHIMER RUN	8800	MB	WWH	0.5	0.0	0.00	0.5	12H	2H
OH48 44	10-200	OHIO BRUSH CREEK (HEADWATERS TO BAKER FORK)	8800	MB	EWH	0.0	0.0	5.9	0.0	15H,	80H,
OH49 27	10-023	BEAR CREEK	8800	MB	WWH	0.0	0.0	0.00	2.5	12H,	2H,65S,

Appendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH49 42	10-400	WHITEOAK CREEK (STERLING RUN TO OHIO RIVER)	8800	MB	EWH	10.5	0.0	0.00	5.5	11H	11H
OH49 69	10-430	NORTH FORK WHITEOAK CREEK	8800	EB	EWH	0.0	0.0	0.0	21.00	11H,	11H,
OH50 1	11-001	LITTLE MIAMI RIVER (GLADY RUN TO CAESAR CREEK)	8800	EB	EWH	0.0	0.00	0.0	12.8	12H, 6H, 1H,	2H,
OH50 2	11-030	NEWMAN RUN	8800	EB	EWH	0.50	0.0	0.0	3.50	6H,	86H,
OH50 4	11-001	LITTLE MIAMI RIVER (BEAVER CREEK TO GLADY RUN)	8800	EB	EWH	0.0	0.00	0.80	8.20	12H, 6H,	2H,
OH50 5	11-032	GLADY RUN	8800	EB	WWH	0.0	0.0	0.0	4.8	12H, 6H,	2H,40M,
OH50 8	11-035	BEAVER CREEK	8800	EB	WWH	0.0	0.0	0.00	1.1	12H, 6H,	2H,
OH50 9	11-036	LITTLE BEAVER CREEK	8800	EB	WWH	0.0	0.0	0.00	6.3	12H, 6H, 5H,11S,14S,	2H,40M,14S, 1S,
OH50 10	11-001	LITTLE MIAMI RIVER (MASSIES CREEK TO BEAVER CREEK)	8800	EB	EWH	0.0	0.0	1.10	5.70	12H,	2H,
OH50 10.1	11-045	SHAWNEE CREEK	8800	MB	WWH	0.7	0.0	0.00	2.0	12H,	40H,
OH50 12	11-400	MASSIES CREEK	8800	EB	WWH	7.7	0.0	0.0	2.3	12H,	40H,
OH50 17	11-001	LITTLE MIAMI RIVER (NORTH FORK TO MASSIES CREEK)	8800	EB	EWH	0.0	0.00	5.9	6.2	12H,	16H,18H, 2M,
OH50 20	11-040	YELLOW SPRINGS CREEK	8800	EB	WWH	0.0	0.0	0.0	2.5	12H,	2H,40H,
OH50 21	11-041	NORTH FORK LITTLE MIAMI RIVER	8800	EB	WWH	0.0	0.0	0.00	0.5	16H,11M,12H,	71H,11H,
OH50 23	11-001	LITTLE MIAMI RIVER (HEADWATERS TO NORTH FORK)	8800	EB	EWH	0.0	0.00	0.0	9.70	12H, M,16M,	16H,18H,77H,76H,
OH50 24	11-043	LISBON FORK	8800	EB	WWH	0.0	0.0	0.00	0.5	12H,11M,	11H,
OH50 25	11-044	GILROY DITCH	8800	EB	WWH	5.0	0.0	0.6	1.4	12H, 6H, 7M,	2H,40M,
OH51 2	11-301	FLAT FORK	8800	EC	WWH	0.0	0.0	0.00	0.5	12H,	11S,16S,
OH52 3	11-200	TODD FORK (LITTLE EAST FORK TO LITTLE MIAMI RIVER)	8800	EC	EWH	0.0	0.0	0.00	0.5	6H,	11S,16S,65S,
OH52 4	11-203	SECOND CREEK	8800	MB	WWH	0.0	0.0	0.00	7.6	12H, 5M,16S,	2H,71S,65S,
OH52 8	11-200	TODD FORK (DUTCH CREEK TO LITTLE EAST FORK)	8800	MB	EWH	0.0	0.0	3.10	0.0	12H,	11H, 2H,
OH52 14	11-212	LYTLE CREEK	8800	MB	WWH	3.40	0.0	1.10	5.60	12H, 6H, 5M, M,15S,16S,	2H,40M,71M,80S,
OH52 17	11-200	TODD FORK (HEADWATERS TO DUTCH CREEK)	8800	EC	EWH	0.0	0.0	0.00	0.5	12H,	65S,
OH52 18	11-215	DUTCH CREEK	8800	EC	EWH	0.0	0.0	0.00	0.5	12H,	90H,
OH53 1	11-100	E. FK. LITTLE MIAMI R. (STONELICK CR. TO L. MIAMI)	8800	EB	EWH	0.00	2.20	6.6	0.0	12H, 5H,	2H,65S,
OH53 8	11-107	STONELICK CREEK	8800	MB	WWH	3.6	0.0	0.00	3.1	12H,15S,	2H,80S,
OH53 20	11-100	E. FK. LITTLE MIAMI R. (EAST FORK LAKE)	8800	EB	EWH	0.0	0.0	4.9	8.50	12H,15H,16M,	2H,74H,73M,
OH53 36	11-100	E. FK. LITTLE MIAMI R. (HOWARD RUN TO TODD RUN)	8800	EB	EWH	8.2	0.0	0.0	3.1	12H,	2H,
OH53 45	11-100	E. FK. LITTLE MIAMI R. (SOLOMON RUN TO HOWARD RUN)	8800	EB	EWH	0.0	0.00	0.0	11.20	12H,	11H,
OH53 52	11-100	E. FK. LITTLE MIAMI R. (DODSON CR. TO SOLOMON RUN)	8800	EB	EWH	0.0	0.00	0.0	14.4	12H,11H,	11H, 2M,
OH53 53	11-147	SOLOMON RUN	8800	EB	WWH	1.8	0.0	0.00	2.1	12H, 6H,15M,	2H,80M,
OH53 57	11-151	DODSON CREEK	8800	EB	EWH	0.0	0.0	0.50	0.0	H, 1H,	2H,
OH53 60	11-100	E. FK. LITTLE MIAMI R. (HEADWATERS TO DODSON CR.)	8800	EB	WWH	7.7	0.0	1.9	6.5	12H, M,11H,	65H,11H,
OH54 1	11-001	LITTLE MIAMI RIVER (E. FK. L. MIAMI R. TO OHIO R.)	8800	EB	EWH	0.00	3.90	7.6	0.0	12H,15M,	2H,40H,73M,
OH54 4	11-004	DUCK CREEK	8800	EB	WWH	0.00	0.0	0.0	8.20	12H, 6M,	40H,

ppendix A (Continued).

Vaterbody D No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
)H54 7	11-001	LITTLE MIAMI R. (O'BANNON CR. TO E. FK. L. MIAMI)	8800	EB	EWH	0.00	4.60	6.70	1.20	12H, 6M,	2H,
)H54 9	11-007	SYCAMORE CREEK	8800	EB	WWH	0.0	0.0	0.00	0.4	12H, 6H,	2H,
)H54 16	11-001	LITTLE MIAMI RIVER (TURTLE CR. TO O'BANNON CR.)	8800	EB	EWH	0.0	0.0	7.1	2.1	12H, 5H,	1H, 2M,
)H54 20	11-017	SIMPSON CREEK	8800	EC	WWH	0.0	0.0	0.70	0.0	6H,	2H,
)H54 23	11-020	MUDDY CREEK	9002	MB	WWH	2.50	0.00	2.50	0.00	12H,	2H,
)H54 25	11-022	DRY RUN	8800	EB	WWH	0.80	0.0	0.00	1.00	12H,	2H,65H,
)H54 27	11-001	LITTLE MIAMI RIVER (TODD FORK TO TURTLE CREEK)	8800	EB	EWH	0.0	0.0	5.3	0.0	12H,	2H,
)H54 30	11-001	LITTLE MIAMI RIVER (CAESAR CREEK TO TODD FORK)	8800	EB	EWH	5.80	0.0	3.90	2.70	12H, 6H, 5M,	2H, 1H,
)H55 2	14-001	GREAT MIAMI RIVER (INDIAN CREEK TO PLUM CREEK)	8800	EB	WWH	0.80	0.0	7.20	0.0	12H,	11H,65S,
)H55 11	14-001	GREAT MIAMI RIVER (BOKENGEHALAS CR. TO INDIAN CR.)	8800	EB	WWH	0.90	0.0	2.10	2.90	12H,16S,	73S,11H, 2M,
)H55 15	14-072	STONY CREEK (HEADWATERS TO LEE/GRAVE CREEK)	8800	EB	WWH	3.20	0.0	1.10	0.0	11H	10H
)H55 16	14-075	MCKEE CREEK	8800	EB	EWH	0.0	0.0	0.00	0.5	6H,	90H,
)H55 17	14-076	BOKENGEHALAS CREEK	8800	EB	WWH	3.1	0.0	0.00	1.0	5H,16M,12M,	2H,71M,11S,
)H55 18	14-077	BLUEJACKET CREEK	8800	EB	WWH	0.0	0.0	0.60	5.8	5H,16S,12M, M,	2H,71S, 1S,11S,
)H55 19	14-085	OPOSSUM RUN	8800	EB	WWH	0.0	0.0	0.0	1.0	15M, 5H, S,	80M, 2H,40M,
)H55 20	14-001	GREAT MIAMI R. (MUCHINIPPI CR. TO BOKENGEHALAS CR)	8800	EB	WWH	0.0	0.0	6.50	1.90	12H, 6H,16M,	2H,71M,
)H55 27	14-700	MUCHINIPPI CREEK	8800	EB	WWH	0.0	0.0	13.7	0.0	16H,	71H,11S,
)H55 35	14-084	CHEROKEE MANS RUN	9002	MB	WWH	0.00	0.00	1.00	0.00	1H,	90H,
)H55 36	14-800	SOUTH FORK GREAT MIAMI RIVER	9002	MB	WWH	4.20	0.00	4.40	1.60	12H,	65H,
)H55 36.1	14-805	BELLE CENTER TRIBUTARY	9002	MB	WWH	0.00	0.00	0.00	0.60	12H,11M,16M,	65H,11M,76M,
)H55 38	14-801	SLOW DITCH (LIGGITT DITCH)	8800	EB	WWH	0.0	0.0	0.00	0.5	12H,15M,	65H,80M,
)H55 41	14-804	VAN HORN CREEK	9002	MB	WWH	0.00	0.00	0.00	3.00	15H,16H,11M,12M, 9M,	71H,78H,11M,
)H55 42	14-803	BLACKHAWK RUN	9002	MB	WWH	0.00	0.00	0.00	3.00	15H,16H, 1M,11M, 12M, 9M,	71H,78H,11M,90M,
)H55 43	14-802	NORTH FORK GREAT MIAMI RIVER	9002	MB	WWH	0.00	0.00	0.00	15.00	15H,16H,14S,12S, 9S,	71H,78H,76M,11M,
)H56 1	14-001	GREAT MIAMI RIVER (LOST CREEK TO STILLWATER RIVER)	8800	EB	WWH	12.5	0.0	4.2	0.7	12H, 6M,73S,	2H, 1M,40M,16S,
)H56 1.1	14-093	TRIB. TO GREAT MIAMI RIVER (96.4)	8800	EC	WWH	0.0	0.0	0.0	2.0	6H,12H,	2H,
)H56 3	14-043	HONEY CREEK	8800	EB	EWH	3.40	0.0	6.60	0.0	6H,	11S,16S,
)H56 8	14-048	LOST CREEK	8800	EB	EWH	0.50	0.0	9.20	0.0	15H,	12H,11S,
)H56 8.1	14-091	GUSTIN DITCH	8800	EC	WWH	0.0	0.0	0.00	0.5	12H,	40H,
)H56 10	14-001	GREAT MIAMI RIVER (SPRING CREEK TO LOST CREEK)	8800	EB	WWH	6.8	0.0	2.10	0.40	12M, 6H, 5M,16S,	1M, 2H,73S,
)H56 10.3	14-095	B.F. GOODRICH TRIB	9002	MB	WWH	0.00	0.00	0.00	1.00	5H,	1H,
)H56 11	14-050	SPRING CREEK	8800	EB	EWH	0.0	0.0	1.10	0.0	12H,	16H,11S,
)H56 12	14-001	GREAT MIAMI RIVER (LORAMIE CREEK TO SPRING CREEK)	8800	EB	WWH	6.30	0.0	3.20	1.10	12H, 6H, 5H,14S,16S,	1H, 2H,73S,40M,
)H56 32.1	14-614	CLAY CREEK	8800	MC	WWH	0.0	0.0	0.00	4.5	12H,	2H,

Appendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH56 36	14-001	GREAT MIAMI RIVER (PLUM CREEK TO LORAMIE CREEK)	8800	EB	WWH	11.9	0.0	0.3	0.0	12H,	2H,
OH56 39	14-060	TAWAWA CREEK	8800	EB	WWH	0.0	0.0	0.00	3.7	12H,11M,	14H,65M,11S,
OH57 1	14-200	STILLWATER RIVER (BRUSH CREEK TO GREAT MIAMI R.)	8800	EB	EWH	0.0	0.0	10.5	3.7	12H, 6M,	2H,40M,40S,
OH57 1.1	14-242	TRIB. TO STILLWATER RIVER (RM 11.7)	8800	EC	WWH	0.0	0.0	0.00	0.5	12H, 6H,	2H,
OH57 5	14-200	STILLWATER RIVER (LUDLOW CREEK TO BRUSH CREEK)	8800	EB	EWH	3.6	0.0	3.0	0.2	12H, 6M,	2H,
OH57 7	14-210	LUDLOW CREEK	8800	EB	WWH	0.30	0.0	12.80	0.40	5H,	1H,
OH57 8	14-211	BRUSH CREEK	8800	EB	WWH	0.0	0.0	0.50	3.1	12H, 6S, S,15S,	1H,80S,65S,
OH57 14	14-200	STILLWATER RIVER (GREENVILLE CR. TO LUDLOW CR.)	8800	EB	EWH	6.40	0.0	5.00	0.0	12H,	2H,73S,72S,
OH57 18	14-208	PAINTER CREEK	8800	EB	WWH	0.0	0.0	0.0	17.0	12H,16H, 5S,	40H, 2H, 1S,66S,71H,
OH57 18.1	14-241	SYCAMORE DITCH	8800	EB	WWH	0.0	0.0	0.0	1.0	12H, 6S,	2H,40S,
OH57 21	14-220	GREENVILLE CREEK (DIVIDING BR. TO STILLWATER R.)	8800	EB	EWH	0.0	0.0	14.00	1.20	12H,	2H,40M, 1S,
OH57 26	14-220	GREENVILLE CREEK (WEST BR. TO DIVIDING BR.)	8800	EB	EWH	0.0	0.0	1.9	7.2	12H, 6M,16S,	2H,40M, 1S,73S,
OH57 32	14-220	GREENVILLE CREEK (HEADWATERS TO WEST BRANCH)	8800	EB	EWH	0.0	0.0	7.9	3.3	12H,11M,	2M,11H,
OH57 37	14-200	STILLWATER RIVER (SWAMP CREEK TO GREENVILLE CREEK)	8800	EB	EWH	0.0	0.0	4.9	8.6	12H, 1M,	2H,63M,
OH57 38	14-218	HARRIS CREEK	8800	EB	WWH	1.50	0.0	0.00	3.80	12H,16M,	71H,11M,14M,
OH57 39	14-219	BALLINGER RUN	8800	EB	WWH	0.0	0.0	0.0	2.0	12H, 6M,	40H,65M, 2M,62S,11S,14S,
OH57 41	14-235	SWAMP CREEK	8800	EB	WWH	0.0	0.0	0.50	4.00	12H, 6M,16M, S,	2H,71M,11S,76S,
OH57 42	14-236	INDIAN CREEK	8800	EB	WWH	0.0	0.0	0.00	2.0	16H,	71H,76M,
OH57 43	14-200	STILLWATER RIVER (NORTH FORK TO SWAMP CREEK)	8800	EB	EWH	0.0	0.0	0.0	2.1	12H,	2H,
OH57 45	14-200	STILLWATER RIVER (HEADWATERS TO NORTH FORK)	8800	EB	EWH	0.0	0.0	1.80	13.2	12H,16M,11M,	2H,40M,71M,63S,
OH57 46	14-238	NORTH FORK STILLWATER RIVER	8800	EB	WWH	0.50	0.0	0.40	0.00	12H,16M,	40H,71M, 2S,
OH58 1	14-100	MAD RIVER (MUD RUN TO GREAT MIAMI RIVER)	8800	MB	WWH	0.4	0.0	9.00	0.70	12H,16M, S, 6M,	2H,71M, 1S,40S,
OH58 4	14-100	MAD RIVER (DONNELS CREEK TO MUD RUN)	8800	MB	WWH	0.0	0.0	8.3	0.0	1H,12M,	2H,
OH58 11	14-100	MAD RIVER (BUCK CREEK TO DONNELS CREEK)	8800	MB	WWH	0.0	0.0	2.10	5.60	12H, 1M, 6M,	2H,
OH58 15	14-110	BUCK CREEK (BEAVER CREEK TO MAD RIVER)	8800	MB	WWH	0.0	0.0	0.0	6.0	16M,12H,11S,	40H,73M,76M,
OH58 16	14-111	BEAVER CREEK	8800	MB	CWH	0.0	0.0	0.50	0.0	11H,	11H,
OH58 18	14-110	BUCK CREEK (EAST FORK BUCK CREEK TO BEAVER CREEK)	8800	MB	WWH	0.0	0.0	0.00	1.1	12H,15H,	73H,74H,
OH58 24	14-117	MOORE RUN	8800	MB	CWH	1.2	0.0	3.1	3.8	16H,11H,	71H,11S,
OH58 24.1	14-143	KENTON CREEK	8800	MB	WWH	0.0	0.0	0.0	5.0	12H, 6H,15M,	2H,80M,
OH58 25	14-120	CHAPMAN CREEK	8800	MB	WWH	0.00	0.50	0.00	4.00	11H, 6M, 5S,	63H,
OH58 36	14-130	NETTLE CREEK	8800	EB	CWH	4.70	0.0	4.5	2.3	15H,11H,	80H,11H,14M,
OH58 42	14-140	ST. PARIS TRIBUTARY	8800	EB	WWH	0.0	0.0	0.00	2.6	12H, 6H,	2H,14S,
OH58 47	14-136	KINGS CREEK	8800	MB	CWH	4.90	0.0	3.30	0.80	16M,11H,	14H,77M,76S,
OH58 48	14-100	MAD RIVER (MACOCHEE CREEK TO KINGS CREEK)	8800	MB	CWH	0.00	5.40	2.6	0.0	5H,12S,	84H, 2S,

Appendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH58 51	14-100	MAD RIVER (HEADWATERS TO MACOCHEE CREEK)	8800	MB	CWH	0.00	9.70	0.5	0.0	11H,	1H,
OH59 2	14-501	LITTLE TWIN CREEK	8800	MB	WWH	2.30	0.0	4.70	0.0	15H,12M,	80H, 2M,
OH59 2.1	14-516	REIGLE DITCH	8800	MB	WWH	0.0	0.0	1.6	0.4	12H, 6H,15M,	2H,80M,
OH59 3	14-500	TWIN CREEK (BANTAS FORK TO LITTLE TWIN CREEK)	8800	MB	EWH	3.1	0.0	14.5	0.0	12H,	2H,11S,
OH59 7	14-505	BANTAS FORK	8800	MB	EWH	5.10	0.0	3.40	0.0	11H	11H
OH59 10	14-500	TWIN CREEK (PRICE CREEK TO BANTAS FORK)	8800	MB	EWH-P	0.0	0.0	4.4	1.0	16H,12M,	76H, 2M,
OH59 15	14-500	TWIN CREEK (HEADWATERS TO PRICE CREEK)	8800	MB	EWH-P	0.0	0.0	0.50	12.0	12H,	14H, 2H,77S,11S,
OH60 1	14-001	GREAT MIAMI RIVER (FOURMILE CREEK TO RM 26.6)	8800	EB	WWH	0.0	0.0	1.00	11.80	12M, 5H,15S, 3S,16M, 8H,	1M,2M,40S, 74S,66H,73M,
OH60 2	14-010	INDIAN CREEK	8800	MB	EWH	0.9	0.0	5.00	4.40	12H,11M, 8M,	2H,11M,
OH60 9	14-001	GREAT MIAMI RIVER (DICKS CREEK TO FOURMILE CREEK)	8800	EB	WWH	0.0	0.0	2.9	6.3	12H, 5H, 8S,	1H, 2H,
OH60 14	14-018	DICKS CREEK	8800	MB	MWH-P	5.20	0.0	2.6	2.7	5H,11M,16M, 1M, 9S,	1H,71M,77M,
OH60 15	14-020	SHAKER CREEK	8800	MB	WWH	0.10	0.0	0.0	8.60	16M,15S,12H,11M,	2H,71M,73S,77M,
OH60 17	14-019	NORTH BRANCH DICKS CREEK	8800	MB	WWH	0.5	0.0	0.0	5.1	16H,11M,12S,	71H,40M,
OH60 18	14-001	GREAT MIAMI RIVER (TWIN CREEK TO DICKS CREEK)	8800	EB	WWH	0.0	0.0	0.80	9.00	12H, 5H, M,15S, 6M,16S,	1H, 2H,74S,73S,
OH60 21	14-001	GREAT MIAMI RIVER (BEAR CREEK TO TWIN CREEK)	9002	MB	WWH	0.00	0.00	7.40	2.80	12H,14M,	2H, 1S,73M,
OH60 22	14-024	CLEAR CREEK	8800	MB	WWH	2.5	0.0	0.80	2.10	12H,	2H,65S,
OH60 22.1	14-094	TRIB. TO CLEAR CREEK (RM 7.1)	8800	EC	WWH	0.0	0.0	0.00	0.5	6H,	2H,
OH60 27	14-029	BEAR CREEK	8800	EB	WWH	7.20	0.0	0.00	2.90	6H,12H,	2H,65S,
OH60 33	14-001	GREAT MIAMI RIVER (WOLF CREEK TO BEAR CREEK)	8800	EB	WWH	1.2	0.0	4.3	7.1	12H, 5H, 6M,16S,	2H,73S,40M,
OH60 36	14-037	WOLF CREEK	8800	MB	WWH	1.40	0.0	0.00	3.30	12H,	2H,85H,65S,
OH60 41	14-001	GREAT MIAMI RIVER (STILLWATER RIVER TO WOLF CREEK)	8800	EB	WWH	0.0	0.0	2.4	0.0	12H, 5H, 6H,16S,	40H, 1M,73S,
OH61 5	14-308	E. FK. WHITEWATER R. (HEADWATERS TO OHIO/INDANA)	8800	EB	WWH	0.0	0.0	4.3	6.8	11H	10H
OH61 11	14-400	FOURMILE CREEK (SEVENMILE CREEK TO GREAT MIAMI R.)	8800	EB	WWH	3.60	0.0	0.10	0.0	16H,	70H,11S,
OH61 12	14-410	SEVENMILE CREEK (PAINT CREEK TO FOURMILE CREEK)	8800	EB	EWH	1.00	0.0	0.00	0.30	6H,	11S,14S,65S,
OH61 24	14-400	FOURMILE CREEK (L. FOURMILE CR. TO SEVENMILE CR.)	8800	EB	WWH	12.5	0.00	1.30	1.20	H, 6H, 7S,	2H,
OH62 1	14-001	GREAT MIAMI RIVER (TAYLOR CREEK TO OHIO RIVER)	8800	EB	WWH	0.0	0.0	7.3	7.7	11M,12H,19M,16H,	1M,73H, 2H,
OH62 3	14-300	WHITEWATER RIVER (OHIO/INDIANA TO GREAT MIAMI R.)	8800	EB	WWH	0.0	0.0	1.80	6.40	15H, 6S,	74H, 2S,
OH62 3.2	14-317	WELKER LATERAL	8800	EB	WWH	1.10	0.0	0.00	0.50	12H,16M,	11H,71M,
OH62 5.1	14-319	KIATA CREEK	9002	MB	WWH-P	0.80	0.00	0.00	0.50	16H,	73H,
OH62 13	14-001	GREAT MIAMI RIVER (RM 26.6 TO TAYLOR CREEK)	8800	EB	WWH	0.0	0.0	10.6	0.0	12H,	1M, 2H,
OH62 15	14-006	BLUEROCK CREEK	8800	MB	WWH	0.0	0.0	0.50	0.00	12H, 1H,	2H,40S,
OH62 23	23-001	MILL CREEK (WEST FORK MILL CREEK TO OHIO RIVER)	8800	EC	LWH	0.0	0.0	0.0	11.6	12H, 1H,20H,19H,16H,	2H, 1H,40H,40M,77M,
OH62 26	23-004	WEST FORK MILL CREEK (UPSTREAM)	8905	MB	LWH	0.00	0.00	0.00	15.20	22H,16M,	1H, 4M,
OH62 27	23-001	MILL CREEK (SHARON CREEK TO WEST FORK MILL CREEK)	8905	MB	LWH	0.00	0.00	0.00	4.10	22H,16M,	1H, 4M,

Appendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH62 28	23-005	SHARON CREEK	8905	MB	WWH	0.00	0.00	0.00	5.00	22H,	90H,
OH62 30	23-001	MILL CREEK (HEADWATERS TO SHARON CREEK)	8905	MB	LWH	0.00	0.00	0.00	2.10	12H,	2H, 4M,
OH62 30.1	23-010	GLENDALE TRIB.	8800	EC	WWH	0.0	0.0	0.0	2.0	12H, 6M,	2H,
OH63 1	22-001	WABASH RIVER (BEAVER CREEK TO OHIO/INDIANA LINE)	8800	MB	WWH	0.0	0.0	0.0	2.7	16H,11M,12S,	71H,11M, 2S,65S,
OH63 4	22-100	BEAVER CREEK (GRAND LAKE ST. MARYS TO WABASH R.)	8800	MB	WWH	0.0	0.0	0.00	10.4	12H,16M, 6M,	2H,71M,16S,
OH63 16	22-001	WABASH RIVER (STONY CREEK TO BEAVER CREEK)	8800	MB	WWH	0.0	0.0	8.2	4.4	16H,11M,12S,	71H,11M, 2S,
OH63 19	22-001	WABASH RIVER (HEADWATERS TO STONY CREEK)	8800	MB	WWH	4.40	0.0	2.80	2.4	16H,11M,12S, 5S,	71H,11M, 2S, 1M,85M,
OH63 19.1	22-012	TRIB. TO WABASH RIVER	8800	MC	LRW-P	0.0	0.0	0.0	1.0	5H,12H,	1H,85H,16M,
OH64 4	04-503	BLACK CREEK	8800	MB	WWH	0.0	0.0	0.00	0.5	16H,11M,12S,	71H,11S,65S,
OH64 12	04-510	TWELVEMILE CREEK	8800	EB	WWH	0.0	0.0	0.00	2.2	12H,16M,11S,	11H,71S,65S,
OH64 18	04-500	ST. MARYS RIVER (MIAMI/ERIE CANAL TO SIXMILE CR.)	8800	EC	WWH	0.0	0.0	0.0	11.0	5H,12M, 6M,16S,	2H,11M,71S,65S,
OH64 25	04-500	ST. MARYS RIVER (GRAND LAKE TO ST. MARYS)	8800	EC	WWH	0.0	0.0	0.0	1.8	12H, 5M,	2H,11S,65S,
OH64 26	04-524	KOPP CREEK	8800	EB	WWH	0.0	0.0	0.0	12.0	16H,12H,11M, 6M,	71H,11M,16M,84M, 2H, 1H,
OH64 27	04-525	WIERTH DITCH	8800	EB	WWH	0.0	0.0	0.0	5.00	12H,16H, 6M,	2H, 1M,11M,71H,
OH64 28	04-526	TRIB. TO KOPP CREEK (RM 5.4)	8800	EB	WWH	0.0	0.0	0.0	3.0	11M,12H,	11M,16H,
OH64 30	04-518	CENTER BRANCH	8800	MB	WWH	0.0	0.0	0.0	7.0	16H,12M,	71H, 2M,
OH64 31	04-519	CARTER CREEK	8800	MB	WWH	0.0	0.0	0.00	0.5	12H,16M,11S,	11H,71M,
OH65 1	04-001	MAUMEE RIVER (GORDON CREEK TO TIFFIN RIVER)	8800	MB	WWH	0.0	0.0	9.40	6.30	11H,	11H,86H,
OH65 6	04-052	GORDON CREEK	8800	MB	WWH	0.0	0.0	15.2	1.1	12H,11M,16M,	2H,11M,71M,
OH65 9	04-055	MIDDLE FORK GORDON CREEK	8800	MB	WWH	1.40	0.0	0.0	7.10	12H,16M,	2H,71M,
OH65 10	04-001	MAUMEE RIVER (ZUBER CUTOFF DITCH TO GORDON CREEK)	8800	MB	WWH	0.0	0.0	13.0	0.0	11H,12M,	11H, 2M,
OH65 17	04-001	MAUMEE RIVER (OH./IND. BORDER TO ZUBER CUTOFF D.)	8800	MB	WWH	0.0	0.0	0.0	13.4	12H,11S,	2H,11S,
OH65 21	04-400	ST. JOSEPH RIVER (FISH CREEK TO OH/IND. BORDER)	8800	EC	WWH	0.0	0.0	0.50	0.0	5H,	1H,
OH65 34	04-411	EAGLE CREEK	8800	MB	WWH	0.50	0.0	0.50	0.0	12H, 5M,	1H,11S,
OH65 36	04-413	NETTLE CREEK	8800	MC	WWH	0.0	0.0	0.50	0.0	5H,12S,	1H,11S,
OH65 38	04-418	JOHN LATTANER DITCH	8800	MC	LRW	0.0	0.0	0.0	4.0	12H, 5M,16S,	1H,71M,
OH66 1	04-183	OTTAWA CREEK	8800	EC	WWH	0.0	0.0	0.00	0.5	12H,16M,11S,	2H,71S,11S,
OH66 3	04-160	BLANCHARD (EAGLE CREEK TO OTTAWA CREEK)	9002	MB	WWH	0.00	0.00	8.90	3.20	16H,12H, 9H, 5M, 19M,11M	73H, 4H, 2H, 1M,71H,40M, 5M,43
OH66 4	04-224	OIL DITCH	8800	MB	LRW	0.0	0.0	0.0	5.0	1H,12H,19H,	1H,
OH66 4.1	04-251	COOPER TIRE DITCH TO OIL DITCH (FINDLAY)	8800	EC	LRW	0.0	0.0	0.00	0.5	12H, 6H,	65H,
OH66 5	04-185	EAGLE CREEK	8800	EB	WWH	1.10	0.0	5.20	7.70	12H,11M,	2H,11M,
OH66 10	04-160	BLANCHARD (THE OUTLET TO EAGLE CREEK)	9002	MB	WWH	4.50	0.00	0.00	0.50	16H,	73H,
OH66 18	04-160	BLANCHARD (THE OUTLET TO POTATO RUN)	8800	EB	WWH	0.0	0.0	2.30	12.40	12H,11M,	11H,65S,

ppendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
H66 19	04-196	POTATO RUN	8800	EC	WWH	0.0	0.0	0.00	0.5	6H,12M, 9S,	65H,40M,
H66 21	04-160	BLANCHARD RIVER (HEADWATERS TO THE OUTLET)	8800	EB	WWH	0.0	0.0	1.30	5.80	12H,16M,11S,	65M,11H,71M,
H67 1	04-160	BLANCHARD RIVER (CRANBERRY CREEK TO AUGLAIZE R.)	8800	EC	WWH	0.0	0.0	0.0	17.3	12H, 5M,16M,	2M,86H,11S,
H67 6	04-160	BLANCHARD RIVER (RILEY CREEK TO CRANBERRY CREEK)	8800	EB	WWH	0.0	0.0	12.8	0.0	12H, 5M,11M,16S,	2M,86H,11S,
H67 6.1	04-250	TRIB. TO BLANCHARD RIVER (RM 21.5)	8800	EC	WWH	0.0	0.0	0.0	3.0	12H,	2H,
H67 20	04-160	BLANCHARD RIVER (OTTAWA CREEK TO RILEY CREEK)	9002	MB	WWH	8.00	0.00	7.60	0.00	12H, 9H,11M,	2H, 4H,43M,86M,
H68 1	04-200	OTTAWA RIVER (SUGAR CREEK TO AUGLAIZE RIVER)	8800	MB	WWH	0.0	0.0	0.0	6.6	12H, 1M,	1H, 2H,
H68 2	04-201	PLUM CREEK	8800	EC	WWH	0.0	0.0	0.0	14.4	12H,	2H,40H,11S,
H68 4	04-203	SUGAR CREEK	8800	MB	WWH	0.00	5.40	8.10	15.40	1H,15H,12H,	1H,86H,11S,
H68 4.2	04-225	TRIB. TO SUGAR CREEK (MR 18.8)	8800	MB	WWH	0.0	0.0	0.0	2.0	5H,12H, 6M, 1H,	1H,85H,84H,
H68 8	04-200	OTTAWA RIVER (HONEY RUN TO SUGAR CREEK)	8800	MB	WWH	0.0	0.0	0.0	16.3	12H, 1H, 6S,	2H, 1H,
H68 9	04-207	LEATHERWOOD DITCH	8800	EB	WWH	1.00	0.0	0.0	3.00	12H, 6H,	21H,11H,71S,
H68 11	04-200	OTTAWA RIVER (LITTLE OTTAWA RIVER TO HONEY RUN)	8800	MB	WWH	0.0	0.0	0.0	12.4	1H,12M, 6M,	1H, 2H, 4M,
H68 16.1	04-245	CRIDERSVILLE TRIBUTARY	8800	EC	WWH	0.0	0.0	0.00	0.5		
H68 17	04-200	OTTAWA RIVER (HOG CREEK TO LITTLE OTTAWA RIVER)	8800	MB	WWH	1.7	0.0	0.1	13.6	1H,12M,16M,15M, 6M,	2H, 1H, 4M,73M,74M,
H68 17.2	04-246	TRIB. TO OTTAWA RIVER (RM 41.5)	8800	MC	WWH	0.0	0.0	0.50	0.0	5H,	1H,
H68 18	04-214	LOST CREEK	9002	MB	WWH	0.00	0.00	0.00	4.70	22H,15M, 9M,	90H,78M, 1M,32M,
H68 18.1		UNNAMED TRIBUTARY @RM 1.15	9002	MB	WWH	0.00	0.00	0.00	0.50	22H,11M,	90H,32M,65M,
H69 1	04-130	LITTLE AUGLAIZE R. (DOG CREEK TO AUGLAIZE RIVER)	8800	EB	WWH	3.90	0.0	2.0	1.40	16H,15H,11M,	71H,76H,77H,80H,11S,
H69 2	04-131	PRAIRIE CREEK (HAGERMAN CR. TO LITTLE AUGLAIZE R.)	8800	EB	WWH	0.0	0.0	0.0	11.1	16H,11S,	71H,11S,
H69 3	04-132	WEST BRANCH (HOAGLIN CREEK TO PRAIRIE CREEK)	8800	EB	WWH	0.0	0.0	0.0	6.0	16H, 6H,12H, 5M,	71H,63M,65H,11S,
H69 8	04-137	HAGERMAN CREEK	8800	EB	WWH	1.0	0.0	0.0	17.0	16H,12H, 6H,	71H, 2H,11S,
H69 9	04-131	PRAIRIE CREEK (HEADWATERS TO HAGERMAN CREEK)	8800	EB	WWH	2.80	0.0	0.0	11.10	16H,11S,	71H,11S,
H69 10	04-138	DRY CREEK	8800	EC	WWH	0.0	0.0	0.00	2.8	12H, 6H, H,	65H,84H,11S,
H69 11	04-139	MIDDLE CREEK	8800	EC	WWH	0.0	0.0	0.50	0.0	10H,	2H,11M,80M,
H69 15	04-143	TOWN CREEK	8800	EB	WWH	0.0	0.0	8.60	14.80	16H,15H,12M, 6M, M, 5M,	71H,80M, 2M,40M, 1M,
H69 17	04-145	DOG CREEK	8800	EB	WWH	0.0	0.0	0.0	23.8	16H,11M,	71H,11M,
H69 20	04-130	LITTLE AUGLAIZE RIVER (EVANS DITCH TO DOG CREEK)	8800	EB	WWH	7.10	0.00	3.60	14.70	16H,12M,15H, 6M, 2S,11M	71H,76H,77H, 2S,11M,
H69 20.1	04-159	EVANS DITCH	8800	MB	LRW	2.20	0.0	0.0	0.90	5H,12H,	1H,65H,
H69 25	04-130	LITTLE AUGLAIZE RIVER (HEADWATERS TO EVANS DITCH)	8800	EB	WWH	0.0	0.0	0.0	9.6	16H,15H,12S,11M,	71H,76H,77H,80H,11M,
H69 27	04-153	LONG PRAIRIE CREEK	8800	EB	WWH	1.60	0.0	0.0	7.20	16H,12H, 6H,	71H, 2H,11S,
H70 1	04-100	AUGLAIZE RIVER (BLANCHARD R. TO L. AUGLAIZE R.)	8800	MB	WWH	0.0	0.0	0.0	9.7	16H, 5M,12M,11S,	17M, 2M,11S,
H70 3	04-100	AUGLAIZE RIVER (OTTAWA RIVER TO BLANCHARD RIVER)	8800	MB	WWH	0.0	0.0	0.0	7.1	6H,12H,	2H, 1H,11S,
H70 5	04-100	AUGLAIZE RIVER (JENNINGS CREEK TO OTTAWA RIVER)	8800	MB	EWH	0.0	0.0	7.3	0.0	6H,12H,	1H, 2M,11S,
H70 7	04-230	JENNINGS CREEK	9002	MB	WWH	0.00	0.00	3.30	11.20	12H, 1S,11S,	4H, 2M,65S,11S,

Appendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH70 8	04-231	FLAT FORK	9002	MB	WWH	0.00	0.00	0.00	9.60	12H,16H,	4H,71H,87M,65S,
OH70 12	04-100	AUGLAIZE RIVER (SIXMILE CREEK TO JENNINGS CREEK)	8800	MB	EWH	0.0	0.0	1.70	13.60	6H,12H,	1H, 2M,82H,11S,
OH70 13	04-100	AUGLAIZE RIVER (TWOMILE CREEK TO SIXMILE CREEK)	8800	MB	EWH	0.0	0.0	8.8	1.2	12H,	82H,11S,
OH70 13.1	04-074	GOECKE TRIBUTARY	8800	MB	WWH	0.0	0.0	0.0	1.0	12H,	82H,
OH70 14	04-128	SIXMILE CREEK	8800	MB	WWH	0.0	0.0	0.0	6.0	6H, 5H,12H,	1H, 2M,40S,
OH70 14.1	04-079	TRIB. TO SIXMILE CREEK (SPENCERVILLE)	8800	MC	WWH	0.0	0.0	0.0	0.2	12H,	2H,
OH70 25	04-100	AUGLAIZE RIVER (HEADWATERS TO BLACKHOOF CREEK)	8800	EB	WWH	0.0	0.0	1.00	5.90	16H,11S,	71H,11S,
OH71 1	04-100	AUGLAIZE RIVER (FLATROCK CREEK TO MAUMEE RIVER)	8800	MB	WWH	0.0	0.0	6.6	4.5	15H,16M,12M,	14H,77M, 2M,40M,40S,11S,
OH71 2	04-110	POWELL CREEK	8800	EB	WWH	0.0	0.0	0.00	0.5	15H,12M,11S,	80H,11M,65S,
OH71 6	04-114	SOUTH POWELL CREEK	8800	MB	WWH	0.0	0.0	0.00	3.6	16H,12M,11M, 6M, 3S,	71H,86M, 2M,11S,
OH71 6.1	04-072	TRIB. TO SOUTH POWELL CREEK	8800	MB	WWH	0.0	0.0	0.0	1.0	6H,12M,16M,11M,15S,	2H,11M,80S,
OH71 15	04-109	FLATROCK CREEK (WILDCAT CREEK TO AUGLAIZE RIVER)	8800	MB	WWH	0.0	0.0	0.00	0.5	12H,11M,15S,	2H,11M,71S,
OH71 15.1	04-076	OPOSSUM RUN (PAULDING)	8800	MC	WWH	0.0	0.0	0.00	0.5	12H,	2H,
OH71 15.2	04-080	BIG RUN (PAULDING)	8800	EC	WWH	0.00	0.0	0.00	0.5	12H,	2H,
OH71 19	04-100	AUGLAIZE RIVER (L. AUGLAIZE R. TO FLATROCK CREEK)	8800	MB	WWH	0.0	0.0	0.0	5.4	15H,16M, 5M,12M,11S,	74H,71M, 2M,11S,
OH71 20	04-120	BLUE CREEK (CUNNINGHAM CREEK TO AUGLAIZE RIVER)	8800	MB	WWH	0.10	0.0	1.10	0.0	16H,12M,11S,	71H,11S,
OH71 20.1	04-073	DISHER DITCH	8800	MB	WWH	0.20	0.0	0.00	1.80	12H, 6M,16S,	2H,11M,65M,71S,
OH71 29	04-001	MAUMEE RIVER (TIFFIN RIVER TO AUGLAIZE RIVER)	8800	MB	WWH	0.0	0.0	0.0	1.7	11M,16H,	11M,73H,
OH72 1	04-600	TIFFIN RIVER (LICK CREEK TO MAUMEE RIVER)	8800	MB	WWH	0.60	0.0	5.60	2.00	11H,16M, 5S,	11H,71M, 1S,
OH72 6	04-605	MUD CREEK	8800	MB	WWH	1.00	0.0	0.10	2.1	16H,12M,11S,	11H,71H,
OH72 10	04-609	LICK CREEK (LITTLE LICK CREEK TO TIFFIN RIVER)	8800	MB	WWH	0.0	0.0	0.0	10.1	12H,16M,11S,	11H,71M,
OH72 11	04-633	PRAIRIE CREEK	8800	MB	WWH	0.0	0.0	0.00	12.1	5H, 6M,12M,16M, M,11S,	1H, 2H,40M,71M,11S,
OH72 11.7	04-639	TRIB. TO PRAIRIE CREEK (RM 11.0)	8800	EC	WWH	0.0	0.0	0.0	0.5	5H, M,	1H, 2M,40M,
OH72 13	04-609	LICK CREEK (HEADWATERS TO LITTLE LICK CREEK)	8800	MB	WWH	0.0	0.0	0.90	0.0	12H,16M,11S,	11H,71S,
OH72 16	04-600	TIFFIN RIVER (LEATHERWOOD CREEK TO LICK CREEK)	8800	MB	WWH	0.0	0.0	12.80	15.40	16H,12M,11M,	11H,71M,
OH72 18	04-614	BRUSH CREEK	8800	MB	WWH	0.0	0.0	0.0	21.4	12H,16M,11S,	2H,11M,71S,
OH72 21.1	04-637	TRIB. TO BEAVER CREEK (RM 14.2)	8800	EC	WWH	0.0	0.0	0.00	0.5	12H, 6M,11S,	2H,40M,11M,71M,65S,
OH73 1	04-026	BAD CREEK (UNNAMED TRIB. S. OF DELTA TO MAUMEE R.)	8905	MB	WWH	0.00	0.00	0.00	14.40	12H,16S,	16H, 2M,71S,
OH73 1.1	04-092	TRIB. TO BAD CREEK (RM 14.4)	8800	MC	WWH	0.0	0.0	0.00	0.5	12H, 6M,	90H,
OH73 2	04-026	BAD CREEK (HEADWATERS TO UNNAMED TRIB. S OF DELTA)	8800	MB	WWH	0.0	0.0	0.00	5.60	11H,	11H,
OH73 8	04-031	LOST CREEK	8800	MB	WWH	0.0	0.0	0.0	11.2	12H,	11S,
OH73 16	04-037	NORTH TURKEYFOOT CREEK	8800	EB	WWH	0.0	0.0	0.0	25.0	12H, 5M,15S,	2H,86S,11S,
OH73 16.1	04-094	TRIB. TO NORTH TURKEYFOOT CR. (RM 1.6)	8800	EC	WWH	0.0	0.0	0.50	0.0	6H, 5M,12S,	90H,
OH73 16.2	04-082	TRIB. TO NORTH TURKEYFOOT CR. (RM 6.7)	8800	MC	WWH	0.0	0.0	0.50	0.0	12H,	2H,

Appendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH73 16.3	04-083	TRIB. TO NORTH TURKEYFOOT CR. (RM 18.4)	8800	MC	WWH	0.8	0.0	0.0	0.2	6H, 9H,	2H,
OH73 17	04-038	KONZEN DITCH	8800	MB	WWH	0.0	0.0	7.5	0.0	11H,16M,	11H,71M,
OH73 18	04-001	MAUMEE RIVER (VAN HYNING CR. TO N. TURKEYFOOT CR.)	8800	MB	WWH	7.1	0.0	0.0	0.6	11H,16H,12M,	11H,73H, 2M,
OH73 21	04-001	MAUMEE RIVER (WADE CREEK TO VAN HYNING CREEK)	8800	MB	WWH	0.0	0.0	1.10	5.50	11H,16H,12M,	11H,73H, 2M,
OH73 26	04-001	MAUMEE RIVER (AUGLAIZE RIVER TO WADE CREEK)	8800	MB	WWH	2.50	0.0	5.9	3.50	16M,12H, 5M,11S,	2H, 1M,11S,73M,40M,
OH74 2.1	04-085	WEST BRANCH TONTAGONY CREEK	8800	EC	WWH	0.0	0.0	0.00	0.5	12H,	2H,
OH74 9	04-070	HICKEY DITCH	8800	EC	LRW	0.0	0.0	0.00	0.5	10H	50H
OH74 11	04-019	YELLOW CREEK	8800	EB	WWH	0.0	0.0	0.0	14.6	11M,12H,42M,16S,	11M, 2H,40S,71S,
OH74 13	04-021	LITTLE YELLOW CREEK	8800	EB	WWH	0.0	0.0	0.0	7.0	12H,	2H,40M,11S,65S,
OH74 16	04-001	WEST BEAVER CREEK	8800	MB	WWH	1.80	0.0	1.00	2.20	11H,16H,12M,	11H,73H, 2M,
OH75 1	04-001	MAUMEE RIVER (WATERVILLE TO SWAN CREEK)	8800	MB	WWH	0.4	0.0	1.3	19.00	12H,11S, 3H, 5S,	2H
OH75 2	04-002	DUCK CREEK	8800	MB	WWH	1.30	0.0	0.0	1.90	5H,12M,	63H,65S,
OH75 3	04-003	SWAN CREEK (BLUE CREEK TO MAUMEE RIVER)	8800	MB	WWH	0.0	0.0	0.0	22.2	5H,12M,19H, 3M,	40H,84M,
OH75 6	04-006	BLUE CREEK	8800	MB	WWH	0.0	0.0	0.50	0.0	12H,	2H,65S,
OH75 16	04-300	OTTAWA RIVER	8800	MB	WWH	0.0	0.0	0.0	19.8	3H,12M,16M,11M, 1M,	66H,40M, 1M,11S,85M,
OH75 18	04-320	TENMILE CREEK	8800	MB	WWH	0.0	0.0	1.20	3.00	12H,16M,	40H,51M,40M,71M,65S,
OH75 22	04-065	BEAR CREEK (HEADWATERS TO OHIO/MICHIGAN BORDER)	8800	MC	WWH	0.0	0.0	0.00	0.5	12H,	40H,11S,16S,
OH75 22.1	04-093	TRIB. TO BEAR CREEK (RM 12.3)	8800	MC	WWH	0.0	0.0	0.00	0.5	6H,	2H,11M,
OH76 3	16-216	PACKER CREEK	8800	MC	WWH	0.0	0.0	0.00	0.5	12H,	11S,65S,63S,
OH76 5	16-215	TOUSSAINT CREEK (HEADWATERS TO TRIB. E. OF GENOA)	8800	MB	WWH	1.0	0.0	0.00	1.0	16H,	71H,
OH76 11	16-205	CRANE CREEK	8800	EC	WWH	0.0	0.0	0.00	0.5	12H, 5M,	11S,65S,
OH76 12	16-206	AYERS CREEK	8800	EC	WWH	0.0	0.0	0.0	6.0	12H, 5M,	11S,65S,
OH76 14	16-208	HENRY CREEK	8800	EC	WWH	0.0	0.0	0.0	9.0	5H,12M,	11S,65S,
OH76 24	16-200	OTTER CREEK	8800	MB	WWH	0.0	0.0	0.0	8.0	5H, 1H, 8H, 3M,	1H,85H,63H,61S,
OH77 4	16-103	ROCKY FORD	8800	MB	WWH	5.1	0.0	0.0	17.8	6H,12H, 5H,	2H, 1H,11S,
OH77 4.2	16-107	AIR PRODUCTS TRIB.	8800	MB	WWH	0.50	0.0	0.0	1.50	5H,12M,	1H,
OH77 8	16-105	EAST BRANCH PORTAGE RIVER	9001	MB	WWH	0.00	0.00	0.00	18.00	12H, 1M,15M,	4H, 2M, M,
OH78 3	16-001	PORTAGE RIVER (SUGAR CREEK TO LAKE ERIE)	8800	MB	WWH	0.00	2.00	15.5	0.0	11H,12M,	11H, 2M, 1M,
OH79 9	05-300	TYMOCHTEE CREEK (WARPOLE CR. TO L. TYMOCHTEE CR.)	8800	EB	WWH	0.0	0.0	1.10	20.30	16H,11M,	11H,11M,
OH80 1	05-001	SANDUSKY RIVER (ROCK RUN TO TYMOCHTEE CREEK)	8800	EB	WWH	0.0	0.0	2.10	9.60	12H,11M,	2H,11M,
OH80 9	05-001	SANDUSKY RIVER (BROKEN SWORD CREEK TO ROCK RUN)	8800	EB	WWH	5.50	0.00	6.70	4.90	12H,	2H,40M,
OH80 13.1	05-060	TRIB. TO BROKEN SWORD CREEK (NEVADA)	8800	MC	WWH	0.0	0.0	0.0	2.0	12H,	90H,
OH80 17	05-001	SANDUSKY RIVER (UNNAMED TRIB. TO BROKEN SWORD CR.)	8800	EB	WWH	0.0	0.0	4.50	17.30	12H, 6M, 7S, 5S,	2H,40H,40S,
OH80 20	05-001	SANDUSKY RIVER (HEADWATERS TO UNNAMED TRIB.)	8800	EB	WWH	0.0	0.0	3.40	10.20	12H, 6M,11M,	2H,40H,40M,11M,65S,

Appendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH80 22	05-042	PARAMOUR CREEK	8800	MB	WWH	0.0	0.0	0.2	9.4	12H, 6H,16H, 5M,11M,19S	2H,40M, M,40S,11M,71H,
OH80 22.1	05-059	PPG TRIB. TO PARAMOUR CREEK	8800	MB	WWH	3.40	0.0	0.0	1.60	16H,11M,	11H,
OH80 23	05-055	CRESTLINE WWTP TRIBUTARY	8800	MB	WWH	0.0	0.0	0.0	4.0	12H, 5M, 6M,	1H,40M,40S,85H,
OH80 24	05-056	CRESTLINE TRIBUTARY	8800	MB	WWH	0.0	0.0	0.0	4.0	19H,16M, 5M,11M,	40H, H,71M,77M, 1H,85H,
OH81 1	05-001	SANDUSKY RIVER (BELLS RUN TO WOLF CREEK)	9002	MB	WWH	6.60	0.00	1.70	0.00	15H,	12H,
OH81 2	05-010	SUGAR CREEK	9002	MB	WWH	1.10	0.00	2.20	0.10	3H,	1H,
OH81 13	05-200	HONEY CREEK (BROKEN KNIFE CREEK TO SILVER CREEK)	8800	MB	WWH	0.0	0.0	0.0	18.0	1H,	11H,
OH81 21	05-200	HONEY CREEK (HEADWATERS TO BROKEN KNIFE CREEK)	8800	EB	WWH	1.10	0.0	6.40	0.0	16H,	71H,11S,
OH81 22.1	05-210	TRIB. TO BROKENKNIFE CREEK (NEW WASH.)	8800	MC	WWH	0.0	0.0	0.0	2.0	12H,	90H,
OH81 23	05-001	SANDUSKY RIVER (SYCAMORE CREEK TO BELLS RUN)	8800	EB	WWH	0.0	1.10	11.50	2.20	11M,16M,12H,	11H,73M,40S,
OH82 1	05-001	SANDUSKY RIVER (WOLF CREEK TO LAKE ERIE)	9002	MB	WWH	0.20	0.00	12.90	9.60	15H,16M,11H,	74H,73M,11H,12H,
OH82 15	05-005	WOLF CREEK	8800	EC	WWH	18.4	0.0	0.0	5.5	12H,	65H,11S,
OH82 21	05-219	MUDDY CREEK (GRIES DITCH TO SANDUSKY BAY)	8800	EB	WWH	2.80	0.0	11.10	6.20	12H, 6M,16S,11S,	2H,11M,71S,
OH82 21.1	05-223	GRIES DITCH	8800	EB	WWH	0.0	0.0	3.0	0.0	15H,	80H,
OH82 23	05-219	MUDDY CREEK (HEADWATERS TO GRIES DITCH)	8800	MB	WWH	15.50	0.0	3.2	0.00	16H,12S,	71H,76M,40S,11S,
OH83 1	05-052	PIPE CREEK	8800	EB	WWH	0.0	0.0	1.50	1.10	16H, 5M,11M,	71H,85M, 1M,11S,40S,
OH83 3	05-051	MILLS CREEK	8800	MB	WWH	0.0	0.0	0.0	11.7	6H,12H, H, 5M,85M,	1H, 2H,16S,85M,
OH83 3.3	05-058	CASWELL DITCH	8800	MB	WWH	0.0	0.0	4.0	0.0	5H,	90H,
OH83 3.4	05-057	SNYDERS DITCH	8800	MB	WWH	0.0	0.0	0.0	6.0	6H,12H, 5M,	2H,85H,
OH83 7	05-046	PICKEREL CREEK	8800	EB	WWH	0.0	0.0	6.20	1.00	16H,11M,	14H,11S,
OH83 11	05-045	RACCOON CREEK	8800	MB	WWH	0.0	0.0	0.00	11.9	H,12H, 5M,	1H, 2M,21S,65S,
OH83 11.1	05-053	LITTLE RACCOON CREEK	8800	EB	WWH	1.50	0.0	0.0	3.40	15H,12S,	80H,65S,
OH83 11.2	05-054	BUCK CREEK	8800	EB	WWH	0.50	0.0	0.0	4.50	2H,	13H,
OH84 1	12-001	HURON RIVER	8800	MB	WWH	2.4	0.0	2.0	10.3	15H,12S,	86H, 2S,
OH84 3	12-102	RATTLESNAKE CREEK	8800	MB	WWH	0.0	0.0	0.00	2.4	12H,	2H,
OH84 3.1	12-104	TRIB. TO RATTLESNAKE CREEK	8800	MB	WWH	0.0	0.0	0.0	6.0	15H,	80H,
OH84 5	12-103	NORWALK CREEK	8800	MB	WWH	0.0	0.0	0.00	1.8	12H,	40H,65S,40S,
OH84 7	12-100	EAST BRANCH HURON R. (HEADWATERS TO NORWALK CR.)	8800	MB	WWH	1.9	0.0	4.90	0.0	12H,	40H,
OH84 20	12-200	WEST BRANCH HURON RIVER (HEADWATERS TO MARSH RUN)	8800	MB	WWH	3.20	0.0	0.00	4.80	12H,	2H,65S,
OH84 20.1	12-212	TRIB. TO WEST BRANCH HURON RIVER (SHILOH)	8800	MB	WWH	0.0	0.0	0.00	3.5	12H,	2H,
OH85 3	20-003	BEAVER CREEK	8800	EC	WWH	0.0	0.0	0.00	1.4	12M, 6H,	2H,11S,
OH85 11	21-008	SKELLINGER CREEK	8800	EC	WWH	0.0	0.0	0.0	5.0	12H,	2H,
OH85 12	21-001	VERMILION RIVER (SOUTHWEST BRANCH TO EAST BRANCH)	8800	MB	WWH	0.00	14.90	3.2	0.0	11H,	11H,

ppendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
)H85 14	21-005	SOUTHWEST BRANCH	8800	MB	WWH	3.40	0.0	6.50	0.50	11H,12S,	14H,11M, 2S,
)H85 15	21-001	VERMILION RIVER (HEADWATERS TO SOUTHWEST BRANCH)	8800	MB	WWH	1.50	0.0	8.0	7.80	16H,11M,12S,	71H,11M,40S,
)H85 16	21-006	BUCK CREEK	8800	MB	WWH	0.0	0.0	1.10	7.20	6H,	86H,
)H85 17	21-007	CLEAR CREEK	8800	MB	WWH	2.20	0.0	3.00	0.0	11H,	11H,
)H86 2	20-001	BLACK RIVER	8800	EB	WWH	0.0	0.0	0.0	16.0	M, 3H, 5M, 6H,12H,19M,	1H, 2H,85H,40M,
)H86 3	20-002	FRENCH CREEK	8800	EB	WWH	0.0	0.0	0.4	15.4	12H,	2H,65S,
)H86 4	20-010	EAST BRANCH (HILL SPAULDING DITCH TO W BR BLACK R)	8800	EB	WWH	5.5	0.0	0.00	1.7	12H, 5S,19S,	40H,65M,40M,
)H86 10	20-014	EAST FORK EAST BRANCH BLACK RIVER	8800	MB	WWH	5.1	0.0	0.00	0.8	12H,	2H,65S,
)H86 13	20-020	WEST BRANCH BLACK R. (ELK CR. TO E. BR. BLACK R.)	8800	EB	WWH	0.0	0.0	0.00	4.3	12H,16M,11S, 5S, S,	40H,73M,11S, 1S, 2S,
)H86 14	20-021	PLUM CREEK	8800	MB	WWH	0.0	0.0	0.0	8.0	12H, 7H,11M,15S,	2H,63M,80S,40S,
)H86 17	20-020	WEST BRANCH BLACK R. (CHARLEMONT CR. TO ELK CR.)	8800	MB	WWH	0.0	0.0	0.00	1.8	11H,12M,	11H, 2M,
)H86 18	20-024	CHARLEMONT CREEK	8800	MB	WWH	0.0	0.0	0.00	3.3	11H,12M,	11H, 2M,65S,
)H87 2	13-001	ROCKY RIVER	8800	EB	WWH	0.0	0.0	10.40	0.0	12H, 6M, 5M,	2H, 1M,40S,
)H87 3	13-002	ABRAM CREEK	8800	EB	WWH	0.0	0.0	0.0	7.4	12H, 6H, 5M,	2H,63M,
)H87 4	13-100	EAST BRANCH ROCKY RIVER (HEALEY CREEK TO ROCKY R.)	8800	EB	WWH	7.0	0.0	7.10	2.90	12M, 6H, 5H,	2H,40H,40S,
)H87 5	13-101	BALDWIN CREEK	8800	EB	WWH	0.0	0.0	0.0	9.2	12H, 6M,	2H,40S,
)H87 7	13-103	NORTH ROYALTON "A" TRIB.	8800	EB	WWH	0.0	0.0	0.0	2.0	12H, H, 6S,	2H,40S,
)H87 9	13-104	HEALEY CREEK	8800	EB	WWH	1.10	0.0	0.10	0.00	12H,	2H,40S,
)H87 10	13-200	WEST BRANCH ROCKY RIVER (PLUM CR. TO EAST BRANCH)	8800	EB	WWH	0.0	0.0	2.40	0.70	6H,12M, 5S,	2H,40S,
)H87 11	13-201	PLUM CREEK	8800	EB	WWH	0.0	0.0	0.00	8.5	12H, S,	2H,65M,11S,
)H87 12	13-200	WEST BRANCH ROCKY RIVER (COSSETT CR. TO PLUM CR.)	8800	EB	WWH	4.9	0.0	1.0	10.6	12H, H, 6M,	2H,73M,11S,
)H87 13	13-209	STRONGSVILLE "A" TRIB.	8800	EB	WWH	0.0	0.0	0.0	2.0	26H, H,12M,	2H,65S,40S,
)H87 15	13-200	WEST BRANCH ROCKY RIVER (NORTH BR. TO COSSETT CR.)	8800	EB	WWH	12.3	0.0	4.1	2.0	5H,12M,	63H,
)H87 18	13-210	MONTVILLE LANDFILL TRIBUTARY	8800	EC	WWH	0.0	0.0	0.0	3.00	6H,12H,	63H,
)H87 18.1	13-213	EAST BRANCH MONTVILLE LANDFILL TRIB.	8800	MC	WWH	0.0	0.0	0.0	0.5	6H,12H,	63H,
)H87 18.2	13-214	WEST BRANCH MONTVILLE LANDFILL TRIB.	8800	MC	WWH	0.0	0.0	0.0	0.5	6H,12H,	63H,
)H87 20	13-206	PLUM CREEK	8800	EB	WWH	0.0	0.0	0.00	2.9	12H,	11S,40S,
)H87 21.1	13-211	TRIB. TO GRANGER DITCH (MEDINA #11)	8800	EC	WWH	0.0	0.0	0.00	0.5	12H,	2H,
)H88 1	19-030	L. CUYAHOGA R. (WINGFOOT LAKE OUT. TO CUYAHOGA R.)	8800	MB	WWH	0.0	0.0	0.80	10.20	12H, 1H, 5H,	1H,40H,85H,40S,
)H88 1.1	19-051	CAMP CREEK	8800	MB	WWH	0.0	0.0	0.00	1.6	1H,	40H,40M, 1S,
)H88 1.2	19-049	OHIO CANAL	8800	MB	WWH	0.0	0.0	0.00	4.3	12H,16M, 5S,	40H, 1M,71M,
)H88 2	19-031	SPRINGFIELD LAKE OUTLET	8800	MB	WWH	0.0	0.0	0.0	3.7	6H,12H,15H,19H,	1H,80H, H,84H,
)H88 3	19-032	WINGFOOT LAKE OUTLET	8800	MB	WWH	0.0	0.0	0.0	3.2	1H,	1H,84H,
)H88 4	19-030	L. CUYAHOGA R. (HEADWATERS TO WINGFOOT LAKE OUT.)	8800	MB	WWH	0.0	0.0	0.50	1.2	12H,16H, 5S,	73H,86H, 1S,
)H88 4.1	19-050	UNION OIL TRIB.	8800	MB	WWH	0.0	0.0	1.60	0.0	16H,	71M,

Appendix A (Continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH88 5	19-001	CUYAHOGA RIVER (CONGRESS LAKE OUT. TO L. CUYAHOGA)	9002	MB	WWH	0.00	0.00	0.80	10.30	12H,16M,15M,14S, 3M,	73H,74M, 2M, 1S,42H,85M,
OH88 8	19-028	BREAKNECK CREEK	8800	MB	WWH	2.00	0.0	17.30	0.70	12H,15S, S,	86H, 2M,63S,
OH88 8.1	19-044	BRIMFIELD DITCH	8800	MB	WWH	0.0	0.0	0.00	0.5	6H,	90H,
OH88 9	19-042	WAHOO DITCH	8800	MB	WWH	0.0	0.0	0.0	5.0	12H, S,	2H,65S,
OH88 10	19-029	POTTER CREEK	8800	MB	WWH	0.5	0.0	0.00	0.5	12H,15S,	86H,
OH88 11	19-001	CUYAHOGA RIVER (BLACK BROOK TO CONGESS LAKE OUT.)	9002	MB	WWH	0.50	0.00	0.00	0.50	12H,15M,	2M,74M,43S,
OH89 1	19-001	CUYAHOGA RIVER (BIG CREEK TO LAKE ERIE)	8800	MB	WWH	0.0	0.0	0.0	5.5	12H, 5H, 6H, 8H, 3M,16H,	1H, 2M,40S,40H,72H,85H,
OH89 2	19-002	KINGSBURY RUN	8800	EC	WWH	0.0	0.0	0.00	0.5	5H, 3H,	85H,84H,40S,
OH89 5	19-005	BIG CREEK	8800	MB	LWH	0.0	0.0	0.00	8.4	12H, 5M,19S,	40H, 1M,40S,
OH89 5.1	19-045	FORD BRANCH BIG CREEK	8800	MB	WWH	0.0	0.0	0.0	5.0	12H,	40H, 1H,
OH89 6	19-001	CUYAHOGA RIVER (TINKERS CREEK TO BIG CREEK)	9002	MB	WWH	0.00	0.00	0.00	9.20	6H, 1M, 5M, 7M,	2H,85H, 1M,
OH89 7	19-006	MILL CREEK	8800	MB	LWH	0.0	0.0	0.00	5.6	12H, S,	40H, 1S,63S,
OH89 8	19-007	TINKERS CREEK (POND BROOK TO CUYAHOGA RIVER)	8800	MB	WWH	0.0	0.0	0.0	22.50	12H, 5H,	2H, 1S, 2H,40S,
OH89 8.2	19-048	DEER LICK RUN	8800	MB	LRW	0.0	0.0	0.0	3.0	5H, 6M,12M,	1H,
OH89 8.3	19-046	BEAVER MEADOW CREEK	8800	MB	WWH	0.0	0.0	0.00	1.2	12H, 5M,	2H, 2M,
OH89 9	19-007	TINKERS CREEK (HEADWATERS TO POND BROOK)	8800	MB	WWH	0.0	0.0	2.80	4.70	12H,	2H,40S,
OH89 9.1	19-047	STREETSBORO TRIB. TO TINKERS CREEK	8800	MB	WWH	0.0	0.0	0.00	0.5	12H,	2H,
OH89 10	19-008	POND BROOK	8800	MB	WWH	0.0	0.0	0.0	4.8	12H, 6M,16M,15M,	2H,71M,86M,40S,
OH89 11	19-001	CUYAHOGA RIVER (BRANDYWINE CREEK TO TINKERS CREEK)	9002	MB	WWH	0.00	0.00	0.00	7.80	1H,12M,	2H,
OH89 12	19-009	CHIPPEWA CREEK	8800	MB	WWH	0.0	0.0	0.00	0.5	6H,	14S,40S,
OH89 13	19-010	BRANDYWINE CREEK	8800	MB	WWH	0.0	0.0	0.00	8.0	12H,	2H,
OH89 14	19-001	CUYAHOGA RIVER (YELLOW CREEK TO BRANDYWINE CREEK)	9002	MB	WWH	0.00	0.00	0.00	13.00	12H, 1M,	2H,
OH89 24	19-020	FURNACE RUN	8800	MB	WWH	0.50	0.0	0.10	0.00	6H,	90H,
OH89 27	19-001	CUYAHOGA RIVER (LITTLE CUYAHOGA R. TO YELLOW CR.)	9002	MB	WWH	0.00	0.00	0.00	5.10	12H, 1M,	42H, 5M,
OH89 29	19-024	MUD BROOK	8800	MB	WWH	0.0	0.0	0.0	11.0	12H,15M,16M, 5S, 6S,	80H, 2M,71M, 1S,
OH89 30	19-025	POWERS BROOK	8800	MB	WWH	0.0	0.0	0.00	1.3	12H, 6M,	2H,
OH89 32	19-001	CUYAHOGA RIVER (BIG CREEK TO SHIP CHANNEL (5.	8800	M	WWH	0.0	0.0	0.0	1.7	12H, 5H, 6H, 8H, 3M, 2M,40S,40H,85H,77S,	1H,
OH90 5	15-001	CHAGRIN RIVER (EAST BRANCH TO LAKE ERIE)	9002	MB	WWH	0.00	0.00	0.00	5.00	22H,16H,	90H,72H,
OH90 7	15-001	CHAGRIN RIVER (AURORA BRANCH TO EAST BRANCH)	9002	MB	WWH	0.00	14.60	7.50	0.00	12H,	2H,
OH90 9	15-004	WILLEY CREEK	8800	MC	EWH	0.00	0.50	0.00	0.5	1H,12M,	2H,
OH90 12	15-001	CHAGRIN RIVER (HEADWATERS TO AURORA BRANCH)	9002	MB	WWH	0.00	22.00	0.90	0.00	12H, 5H,	1H,85H,
OH90 16	19-041	EUCLID CREEK	9002	MB	WWH	0.00	0.00	0.00	9.50	12H,16H, 6M, 5M,	4H, 2M,71H,65S,84M,

ıppendix A (Continued).

Vaterbody D No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
)H90 16.1		TRIB. TO EUCLID CREEK	9002	MB	WWH	0.00	0.00	5.00	0.00	12H,	4H, 2H,65M,
)H91 1	03-130	ROCK CREEK (LEBANON CREEK TO GRAND RIVER)	8800	MB	WWH	0.9	0.0	0.20	1.50	12H, 6M,	2H,65S,
)H91 5	03-134	LEBANON CREEK	8800	EC	WWH	0.0	0.0	0.00	0.5	12H, 6S,	65S,63H,
)H91 28	03-001	GRAND RIVER (HEADWATERS TO MUD CREEK)	8800	MB	WWH	1.9	0.0	10.7	1.0	8H,	82H,86M,
)H92 1	03-001	GRAND RIVER (PAINE CREEK TO LAKE ERIE)	9003	MB	WWH	6.30	0.00	2.80	0.20	13H, 5H, 1S,16S,	63H,43M,10M
)H92 1.1	03-001	GRAND RIVER (ESTUARY)	9003	MB	WWH	0.80	0.00	4.20	0.00	13H, 5H, 1S,16S,	63H,43M,10S,
)H92 7	03-100	BIG CREEK	8800	MB	WWH	9.5	0.0	0.30	6.5	12H,	2H,65M,
)H92 16	03-001	GRAND RIVER (MILL CREEK TO PAINE CREEK)	8800	MB	WWH	1.0	0.0	8.3	0.0	6H,	90H,
)H92 23	03-120	MILL CREEK (ASKUE RUN TO GRAND RIVER)	8800	MB	WWH	0.0	0.0	0.50	0.5	15H,	80H,
)H92 24	03-124	CEMETERY CREEK	8800	MB	WWH-P	0.0	0.0	0.00	2.5	12H,	21H, 2M,65S,
)H93 2	07-200	TURKEY CREEK	8800	EC	CWH	0.0	0.0	0.0	1.3	5H,	86H,55S,
)H93 3	07-100	CONNEAUT CREEK (OH./PA. BORDER TO LAKE ERIE)	8800	EC	CWH	0.0	0.0	0.00	6.4	5H,12S,	2H,85S,40S,63S,65S,
)H93 5	07-001	ASHTABULA RIVER	8800	EB	WWH	1.7	0.0	0.00	6.0	5H, 3M,12M, 8S,19S,20S,	1H,85H,40M,40S,63M,
)H93 6	07-010	FIELDS BROOK	8800	MC	LWH	0.0	0.0	0.0	6.0	5H, 3M,14S, 7S,	1H,85H,40S,63M,
)H93 16	07-007	COWLES CREEK	8800	EB	WWH	5.7	0.0	0.0	4.8	12H, 7S,	2H,

Appendix B. List of streams that have impairment of aquatic life uses caused by toxic pollutants including priority pollutant, ammonia, chlorine, and whole effluent toxicity. ("Medium List").

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH 1 8	18-040	EAGLE CREEK (HEADWATERS TO SOUTH FORK EAGLE CREEK)	8800	EB	WWH	9.7	0.0	1.1	3.3	12H, 7H, 6H,	2H,
OH 1 11	18-065	HIRAM TRIB.	8800	EB	WWH	0.0	0.0	0.00	1.3	12H, 6H,	2H,
OH 1 30.1	18-066	NAYLOR DITCH (SEBRING)	8800	EC	LRW	0.0	0.0	0.0	1.0	5H,	1H,40H,
OH 1 33	18-063	FISH CREEK	8800	MB	WWH	0.0	0.0	0.1	4.1	12H, 6H,	2H,
OH 2 1	18-001	MAHONING RIVER (PA. TO YELLOW CREEK)	8800	EB	WWH	0.0	0.0	0.0	4.0	5H, 6H, 8H,12H,	1H, 2H,40M,85M,
OH 2 7	18-001	MAHONING RIVER (YELLOW CREEK TO MILL CREEK)	8800	EB	WWH	0.0	0.0	0.0	6.2	3H, 5H, 6H, 8H,	1H, 2H,85H,40M,
OH 2 12	18-020	MILL CREEK	8800	EB	WWH	0.0	0.00	10.1	10.80	12H, 6H, 5H,11M,	2H,32M,40S,
OH 2 13	18-021	BEARS DEN RUN	8800	EB	WWH	0.0	0.0	0.0	4.10	16M, 1H, 5H,12M,	86M,40H, 1H,65M,
OH 2 17	18-025	INDIAN RUN	8800	EB	WWH	0.0	0.0	0.00	1.2	5H,	40H,32S,
OH 2 20	18-001	MAHONING RIVER (MILL CREEK TO MEANDER CREEK)	8800	EB	WWH	0.0	0.0	0.0	8.5	5H,12H, 6M, 8M,	2H,85H,
OH 2 23	18-015	MEANDER CREEK	8800	EB	WWH	0.0	0.0	0.00	2.0	11H,12H, 6H, 5M,	1H, 2H,
OH 2 27	18-030	MOSQUITO CREEK (MOSQUITO CR. RES. TO MAHONING R.)	8800	EB	WWH	0.0	0.0	0.0	11.8	12H, 6H, 5M,15M,11S,	2H,74M,86S, 1S,
OH 2 35	18-001	MAHONING RIVER (MEANDER CREEK TO DUCK CREEK)	8800	EB	WWH	0.0	0.0	0.0	15.3	5H, 6H,12H, 3M, 8H,19M,	1H, 2H,40M,
OH 2 37	18-028	RED RUN	8800	EC	LRW	0.0	0.0	0.0	4.7	5H, 6H,	1H,40H,
OH 2 37.1	18-067	TRIB. TO RED RUN (WARREN)	8800	EC	LRW	0.0	0.0	0.00	0.5	5H,	40H,
OH 3 1	18-504	LITTLE YANKEE RUN	8800	MB	WWH	5.30	0.0	0.0	7.90	12H, 5M,	2H,40M, 1M,65S,
OH 3 2	18-505	LITTLE DEER CREEK	8800	MB	WWH	0.50	0.0	0.00	0.5	6H,	90H,
OH 4 3	08-100	NORTH FORK (BULL CREEK TO LITTLE BEAVER CREEK)	8800	MB	WWH	0.0	0.0	5.6	0.5	1M, 5H,	1H, 2M,
OH 4 7	08-104	LESLIE RUN	8800	MB	WWH	0.0	0.0	0.10	3.30	5H,12M,	1H, 2M,
OH 4 7.1	08-119	TRIB. TO LESLIE RUN	8800	MB	LRW	0.00	0.0	0.0	2.00	5H,12M,	1H,
OH 4 10	08-100	NORTH FORK (PA. TO BULL CREEK)	8800	MB	WWH	0.0	0.00	1.5	0.0	5H, 9H,11S,	1H, 2H,51S,
OH 4 21	08-204	MIDDLE RUN	8800	MC	WWH	0.0	0.0	0.0	0.50	6H,	90H,
OH 4 22	08-200	MIDDLE FORK (EAST BRANCH TO MIDDLE RUN)	8800	MB	WWH	0.00	0.70	12.2	0.0	2H,12S,	85H, 2S,
OH 4 24	08-200	MIDDLE FORK (HEADWATERS TO EAST BRANCH)	8800	MB	WWH	0.00	0.60	8.50	19.40	2H,12M,16S,11S,	85H, 2M,14S,71S,
OH 4 34.1	08-308	CHEMLIME TRIB.	8800	MB	LRW-P	1.5	0.0	0.0	0.5	6H, 5H,	64H,
OH 4 34.2	08-310	TRIB. TO W. FK. L. BEAVER CR. (RM 13.0)	8800	EC	WWH	0.0	0.0	0.0	2.0	5H,	90H,
OH 4 34.3	08-309	ROWLEY RUN	8800	EC	WWH	0.0	0.0	0.0	2.0	6H,	90H,
OH 5 1	06-200	CROSS CREEK (MCINTYRE CREEK TO OHIO RIVER)	8800	EB	WWH	2.0	0.0	2.1	1.5	12H, 6M, 5M,11S,	2H,51M, 1M,
OH 5 2	06-201	DRY FORK	8800	EB	WWH	0.0	0.0	0.0	5.6	12H,10H, 5M,	2H,51H,
OH 5 9	06-200	CROSS CREEK (SALEM CREEK TO MCINTYRE CREEK)	8800	EB	WWH	1.2	0.0	8.6	2.0	11S, 5M,10H,12S,	2S,51H,
OH 5 12	06-203	CEDAR LICK CREEK	8800	EB	WWH	2.10	0.0	0.0	3.20	12H, 5M,	2H,
OH 5 14	06-200	CROSS CREEK (HEADWATERS TO SALEM CREEK)	8800	EB	WWH	3.10	0.0	6.90	0.0	5M,11H,	51H,
OH 5 43	06-910	NORTH FORK YELLOW CREEK	8800	EB	WWH	16.1	0.0	1.8	0.0	5H,11M,	51H,
OH 6 30	06-806	TOWN RUN	8800	EB	WWH	0.0	0.0	0.00	2.9	12H, 6M,	2H,

Appendix B. (continued).

Waterbody D No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq.Attainment Status (Miles) Life Use	Full	Full (Th.)	Partial	Not	Causes	Sources
OH 7 18	06-100	CAPTINA CREEK (BEND FORK TO OHIO RIVER)	8800	EB	EWH-P	0.00	17.40	0.60	0.00	11H, 1M,	52H,57H,
OH10 1	17-500	TUSCARAWAS RIVER (PIGEON RUN TO SANDY CREEK)	8800	EB	WWH	0.0	0.0	0.0	13.6	12H, 6M, 3M,	2H, 1M,84M,
OH10 5	17-500	TUSCARAWAS RIVER (NEWMAN CREEK TO PIGEON RUN)	8800	EB	WWH	0.0	0.0	0.0	5.2	6H,12H, 3M, M,16M,11S,	1H, 2M,84M,71S,
OH10 7	17-534	NEWMAN CREEK	8800	EC	WWH	0.0	0.0	0.00	0.5	3H,	1H,
OH10 9	17-500	TUSCARAWAS RIVER (CHIPPEWA CREEK TO NEWMAN CREEK)	8800	EB	WWH	0.0	0.0	0.0	11.3	6H,12H, 3H, M, 5M,16M,	1H,2H,40M, 63M,71M,82M,
OH10 11	17-537	FOX RUN	8800	EC	WWH	0.0	0.0	0.00	0.5	12H, 3M,	2H, 1M,
OH10 19	17-556	LITTLE CHIPPEWA CREEK	8800	MB	WWH	0.0	0.0	0.0	11.5	12H, 5M,16M,	2H,71M,
OH10 26	17-500	TUSCARAWAS RIVER (WOLF CREEK TO CHIPPEWA CREEK)	8800	EB	WWH	0.0	0.0	0.0	7.5	6H,14M,12M,16M, 1M , 3M, M,15	1H,2H,40M,63M, 71M,84M,74M,
OH10 28	17-540	WOLF CREEK	8800	EB	WWH	5.2	0.0	0.00	4.6	1H, 3M,12M,16M ,14M, 5S	1H,2M,40M,63M ,85M,71M,
OH10 30	17-542	VAN HYNING RUN	8800	EB	WWH	0.0	0.0	0.00	0.5	12H, 3M,11M,16M,15S,	2H,40M,71M,80S, M,
OH10 31	17-543	PIGEON CREEK	8800	EB	WWH	0.0	0.0	0.0	8.6	3H,19M,11M, 1M, 12M,16M,	1H,2M,40M,84M ,71M,76S,
OH10 33	17-500	TUSCARAWAS RIVER (HEADWATERS TO WOLF CREEK)	8800	EB	WWH	3.60	0.0	8.10	7.60	12H, 3M,16M, 5M,	40H, 1M,40M,71M,84M,
OH11 1	17-450	SANDY CREEK (NIMISHILLEN CREEK TO TUSCARAWAS R.)	8800	MB	WWH	0.0	0.0	0.0	8.0	5H,11M,	1H,51S,84M,
OH11 5	17-460	NIMISHILLEN CREEK (WEST BRANCH TO SANDY CREEK)	8800	MB	LWH	0.0	0.0	0.0	14.7	12H, 6H, 5H, 3M,	1H, 2S,85H,84H,
OH11 6	17-468	HURFORD RUN	8800	MB	LWH	0.0	0.0	0.00	3.1	3H, 5H, 6H,12M,14M,16H	1H,71H,76M, 77M,85H,84H,
OH11 6.1	17-477	DOMER DITCH	8800	MB	WWH	0.0	0.0	0.50	0.1	1H,	1H,
OH11 7	17-461	SHERRICK RUN	8800	MB	WWH	0.0	0.0	0.0	5.0	12H, 5H,	1H, 2H,
OH11 7.2	17-478	OSNABURG DITCH	8800	MB	WWH	0.0	0.0	0.00	0.7	12H, 6H, M,10M,11M,16H,	2H, 1H,51M,71H,
OH11 8	17-464	WEST BRANCH NIMISHILLEN CREEK	8800	MB	WWH	0.0	0.0	0.00	5.9	5H,12H,11H,	1H,40H, H,
OH11 8.1	17-479	MCDOWELL DITCH	8800	MB	WWH	0.0	0.0	0.0	5.0	16H,12M, 5M,11M,	71H,40M, 1M, M,
OH11 8.2	17-480	HOOVER DITCH	8800	MB	WWH	0.0	0.0	0.0	0.5	16H,12M, 5M,	71H, 1M,40H,
OH11 8.3	17-481	ZIMBER DITCH	8800	MB	WWH	3.5	0.0	0.0	0.5	12H, 5M,	1M,40H,
OH11 10	17-462	MIDDLE BRANCH NIMISHILLEN CREEK	8800	MB	WWH	0.0	0.0	12.8	3.8	12H,11H,16S, 5M,	11H,71S,85M,40M,
OH11 10.2	17-482	HARTVILLE DITCH	8800	MB	WWH	0.70	0.0	0.1	2.70	5H,11M,16M,	1H,11M,71M,
OH11 11	17-463	EAST BRANCH NIMISHILLEN CREEK	8800	MB	LWH	4.1	0.0	0.0	6.30	12H, H, 5H, 6M,15S,	1H, 2H,80S,
OH12 13	17-100	CONOTTON CREEK (MCGUIRE CREEK TO INDIAN FORK)	8800	EB	WWH	1.00	0.00	14.10	3.1	1H,12H,	2H,
OH12 23	17-120	IRISH CREEK	8800	MB	WWH	0.30	0.0	7.30	0.0	6H,	90H,
OH12 27	17-123	JEFFERSON CREEK	8800	EC	WWH	0.0	0.0	0.0	4.6	6H,	90H,
OH13 1	17-400	SUGAR CREEK (S. FK. SUGAR CR. TO TUSCARAWAS R.)	9002	MB	WWH	0.00	0.50	0.00	0.70	1H, 5M, 3S,	90H,66S, S,
OH13 14	17-400	SUGAR CREEK (MIDDLE FORK TO SOUTH FORK)	8800	MC	WWH	0.0	0.0	0.00	0.5	H, 5M,	2H,

Appendix B. (continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Attainment Status (Miles) Life Use	Full	Full (Th.)	Partial	Not	Causes	Sources
OH13 16	17-405	ELM RUN	8800	MB	WWH	0.0	0.0	0.00	0.5	6H,	90H,
OH15 24	17-500	TUSCARAWAS RIVER (SUGAR CREEK TO STILLWATER CREEK)	9002	MB	WWH	0.00	1.00	10.00	0.10	6H,12H, 5S, 3S,11S,10S,	2H, 1M,51S,85S,
OH15 26	17-522	PONE RUN	8800	EC	WWH	0.0	0.0	0.50	0.0	5H,	90H,
OH15 31	17-500	TUSCARAWAS RIVER (CONOTTON CREEK TO SUGAR CREEK)	9002	MB	WWH	0.00	0.80	2.70	0.80	6H,12H, 5H, 3M,16M ,11M,10M,14	1H,2H,51M,73M, 85S,66S,
OH15 32	17-500	TUSCARAWAS RIVER (SUGAR CREEK TO NEWMAN CREEK)	8800	EB	WWH	0.0	0.0	0.0	7.6	12H, 3M,16M,11M, 5M,	1H, 2M,
OH16 16	17-730	BLACK FORK MOHICAN R. (ROCKY FORK TO CLEAR FORK)	8905	MB	WWH	1.00	0.00	0.00	13.00	5H,12M,16S,	1H, 3M, 2S,
OH16 19	17-733	ROCKY FORK MOHICAN RIVER	8800	EB	WWH	1.4	0.0	0.00	15.0	5H, 6M,12S,16S, S,	1H, 2H,40M,71S,40S,
OH16 20	17-734	TOUBY RUN	8800	EC	WWH	0.0	0.0	0.00	2.3	5H,	1H,40S,
OH16 21	17-730	BLACK FK. MOHICAN R. (WHETSTONE CREEK TO ROCKY FK)	8800	EB	WWH	0.0	0.0	0.00	0.5	6H,	90H,
OH16 28	17-730	BLACK FK MOHICAN R.(HEADWATERS TO LEATHERWOOD CR.)	8800	MB	WWH	0.0	0.0	3.2	8.4	12H, 6M, 5M,	2H, 1M,40S,85S,14S,
OH17 14	17-718	JEROME FORK MOHICAN R. (LANG CREEK TO LAKE FORK)	8800	MB	WWH	0.0	0.0	0.0	12.3	5H,12H, 6M,	1H, 2H,
OH17 21	17-725	LANG CREEK	8800	MB	WWH	2.4	0.0	0.00	0.8	5H,12H, 6M,	1H, 2H,
OH17 22.1	17-743	TRIB. TO JAMISON CREEK	8800	MB	WWH	0.0	0.0	0.0	1.2	5H, 6M,	1H,40S,
OH17 24	17-718	JEROME FORK (LEIDIGH MILL/ORANGE CR. TO LANG CR.)	8800	MB	WWH	0.0	0.0	0.70	0.9	6H,	90H,
OH18 1	17-650	KOKOSING RIVER (JELLOWAY CREEK TO MOHICAN RIVER)	8800	MB	EWH-P	8.2	0.0	3.2	0.0	6H,	90H,
OH18 14	17-662	SCHENCK CREEK	8800	MB	EWH-P	0.0	0.0	2.80	0.0	12H, 2M,	14H,84M,
OH19 31	17-150	KILLBUCK CREEK (APPLE CREEK TO SALT CREEK)	8800	MB	WWH	0.0	0.0	2.6	9.6	12H, 6H,	2H,
OH19 36	17-181	APPLE CREEK	8800	EB	WWH	1.50	0.0	2.20	5.00	12H, 5H,	2H,40M,
OH19 38	17-150	KILLBUCK CREEK (SHADE CREEK TO APPLE CREEK)	8800	MB	LWH	10.2	0.0	0.0	0.6	12H, 6H,	2H,
OH22 5	17-200	LICKING RIVER (ROCKY FORK TO DILLON RESERVOIR)	8800	EB	WWH	0.0	0.0	2.3	13.2	5M,12H, 1S,	2H, 1M,
OH22 16	17-200	LICKING RIVER (NORTH/SOUTH FORKS TO ROCKY FORK)	8800	MB	WWH	1.7	0.0	6.8	0.0	2H,	2H,
OH22 58	17-233	BEAVER RUN	8800	EC	WWH	0.0	0.0	0.00	0.5	5H,	1H,
OH24 92	17-001	MUSKINGUM RIVER (MILLERS RUN TO MEIGS CREEK)	9002	MB	WWH	0.00	7.00	12.00	1.60	5H, 3H,	1H,
OH24106	17-001	MUSKINGUM RIVER (SALT CREEK TO MILLERS RUN)	9002	MB	WWH	5.00	0.00	6.60	1.10	22H, 5H, 3H,	90H, 1H,
OH25 12	01-500	RUSH CREEK (LITTLE RUSH CREEK TO HOCKING RIVER)	8800	EB	LRW	0.0	0.0	8.90	7.80	12H, 6M,10M,16M,11S,	2H,51M,71S,
OH25 23	01-001	HOCKING RIVER (HEADWATERS TO RUSH CREEK)	8800	EB	WWH	0.0	0.0	0.40	14.20	12H, 3H, 1M,16S, 5M,	2H, 2M,40M 71S,11S,65S,
OH25 25	01-046	BALDWIN RUN	8800	EB	WWH	0.0	0.0	0.00	0.5	12H,16M, 3M,11S,	40H,71M, 1M,40S,
OH25 27	01-048	HUNTERS RUN	8800	EB	WWH	0.0	0.0	0.00	1.1	6H, 3M,16M, 1S,	1H,40M,71M,40S,
OH26 42	01-036	OLDTOWN CREEK	8800	MC	WWH	0.0	0.0	0.00	0.5	12H, 5M,	1H,
OH29 19	09-057	KYGER CREEK	8800	EB	LRW	0.0	0.0	0.0	11.80	10H, 5H,11H,16M,	51H, 1M,86S,
OH29 22	09-060	STINGY RUN	8800	EB	LRW	0.0	0.0	0.0	2.4	5H,	1H,
OH30 1	09-510	LITTLE RACCOON CREEK (DICKASON RUN TO RACCOON CR.)	8800	MB	LRW	0.0	0.0	0.0	12.6	10H, 5M,	51H,
OH30 7	09-510	LITTLE RACCOON CREEK (SAND RUN TO DICKASON RUN)	8800	MB	LRW	0.0	0.0	0.0	12.6	12H,10H, 5M,11S,	2H,85M,51H,52M,

Appendix B. (continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Attainment Status (Miles) Life Use	Full	Full (Th.)	Partial	Not	Causes	Sources
OH30 16	09-524	MEADOW RUN	8800	MB	WWH	0.0	0.00	0.0	4.6	10H,12H, 5M, 6M,	2H,51H,52M,85M,
OH30 17	09-510	LITTLE RACCOON CREEK (HEADWATERS TO SAND RUN)	8800	MB	WWH	0.0	0.0	0.00	5.0	10H, 5M,15M,	51M,80M,
OH30 17.1	09-582	SUGAR RUN	8800	MC	WWH	0.0	0.0	0.00	1.6	10H, 5M,	51H,
OH30 35	09-530	ELK FORK	8800	EB	LRW	0.0	0.0	4.2	14.4	10H, 5H,12M, 9M,11H,	51H, 1M, 2M,
OH30 38	09-533	WOLF RUN	8800	EB	LRW	0.0	0.0	0.0	7.1	10H, 5H,	51H,
OH30 39	09-534	PUNCHEON FORK	8800	EB	LRW	0.0	0.0	0.0	5.6	10H, 5M,	51H,57H,
OH30 40	09-578	AUSTIN POWDER TRIB.	8800	EB	LRW	0.0	0.0	0.0	4.0	H, 9M, 6M, 5M,15H,	1H,51S,80M,
OH31 49	09-500	RACCOON CREEK (LITTLE RACCOON CREEK TO RYAN RUN)	8800	EC	LRW	0.0	0.00	4.3	5.5	10H, 5M,11M,	51H,
OH33 74	09-422	PAINTER CREEK	8800	EC	WWH	0.0	0.0	2.3	0.0	6H,	90H,
OH34 1	02-158	LITTLE SCIOTO RIVER (ROCK FORK TO SCIOTO RIVER)	8800	MB	WWH	0.00	0.0	1.4	9.00	1H,19H, 3H,11M,	2H, 1H,85H,71M,
OH34 1.1	02-236	ROCKSWALE DITCH	8800	MB	LRW	0.0	0.0	0.0	3.0	5H,19H, 1H,	1H,
OH34 1.2	02-235	COLUMBIA DITCH	8800	MB	MWH-P	0.0	0.0	0.0	2.0	12H, 5H,16M,	1H,73M,
OH34 2	02-159	HONEY CREEK	8800	MB	WWH	0.0	0.0	0.50	0.70	6H,	11S,14S,
OH34 8	02-165	RUSH CREEK	8800	MB	WWH	1.10	0.0	7.20	0.0	6H,	11S,14S,
OH34 17	02-001	SCIOTO RIVER (SILVER CREEK TO PANTHER CREEK)	8800	EB	WWH	0.0	0.0	1.50	8.00	12H, 5M, 1M,	2H, 2M,40M,
OH35 1	02-109	MILL CREEK (OTTER RUN TO SCIOTO RIVER)	8800	MB	WWH	0.00	4.00	11.90	5.00	12H, 5H, 6H, M,	1H, 2M,40M,40S,
OH35 1.1	02-239	TOWN RUN	8800	EC	WWH	0.0	0.0	0.00	0.5	5H,	40H, 1M,
OH35 2	02-126	BLUES CREEK	8800	EC	WWH	0.0	0.0	0.50	0.0	5H,	65S,
OH35 8	02-133	CROSSES RUN	8800	MB	WWH	0.0	0.0	0.0	1.9	6H, H, 5M, 2H,	1H,13S,
OH35 18	02-138	BOKES CREEK (HEADWATERS TO BRUSH RUN)	8800	EB	WWH	0.0	0.0	0.00	14.3	6H,12H,11M,	65H, 2H,14M,11S,
OH35 25.1	02-233	TRIB. TO FULTON CREEK	8800	MB	WWH	0.0	0.0	0.00	0.2	12H, 5H,	4H,40H,
OH35 27	02-001	SCIOTO RIVER (LITTLE SCIOTO RIVER TO FULTON CREEK)	8800	MB	WWH	0.0	0.0	5.3	6.6	3H, 1M,12M,16S,11M,	66H, 1M, 2M,73S,10S,
OH36 12	02-450	WHETSTONE CREEK (HEADWATERS TO SHAW CREEK)	8800	MB	WWH	7.4	0.0	5.50	0.70	12H, 6H, M, 8S,	2H,55S,65S,
OH36 35	02-400	OLENTANGY RIVER (HEADWATERS TO MUD RUN)	8800	MB	WWH	2.8	0.0	0.00	6.0	12H, 6H, 5H,	2H, 2H,40H,
OH37 19.1	02-238	INDIAN RUN	8800	MC	WWH	0.0	0.0	0.50	0.0	5H,	90H,
OH38 1	02-100	BIG WALNUT CREEK (ALUM/BLACKLICK CR. TO SCIOTO R.)	8800	MB	WWH	3.6	0.0	0.60	1.90	12H, 6M, 5S,	2H,40S,32S,
OH38 17	02-130	BLACKLICK CREEK	8800	MB	WWH	4.80	0.0	2.40	2.10	12H, 6H, M,	2H,40M,32S,40S,
OH38 29	02-125	PRAIRIE RUN	8800	EB	WWH	0.0	0.0	0.00	2.0	12H, 6H, M,	2H, 1M,40M,40S,64S,
OH39 10	02-210	LITTLE DARBY CREEK (TREACLE CREEK TO SPRING FORK)	8800	EB	EWH	0.0	0.00	8.00	0.0	6H,	11S,
OH39 21	02-200	BIG DARBY CREEK (SUGAR RUN TO FITZGERALD DITCH)	8800	MB	EWH	0.0	0.00	5.9	0.0	12H, 5H,11S,	2H, 1H,11S,
OH39 22	02-200	BIG DARBY CREEK (BUCK RUN TO SUGAR RUN)	8800	MB	EWH	0.00	9.60	2.80	0.40	5H,12H,11S,	1H, 2H,11S,14S,40S,
OH40 14	02-226	TUSSING DITCH	8800	MB	WWH	0.0	0.0	0.0	8.0	16H, 5M,	71H, 1M,
OH40 15	02-085	SYCAMORE CREEK	8800	MB	WWH	2.7	0.0	0.50	1.5	12H, 6M,	2H,65S,
OH40 16	02-078	WALNUT CREEK (PAWPAW CREEK TO SYCAMORE CREEK)	8800	EB	WWH	0.50	0.0	4.80	6.90	12H, 3M,	1H, 2M,
OH40 19	02-087	PAWPAW CREEK	8800	EB	WWH	0.0	0.0	0.00	0.9	12H, 1M,	1H,40M,

Appendix B. (continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Attainment Status (Miles) Life Use	Full	Full (Th.)	Partial	Not	Causes	Sources
OH41 34	02-069	SCIPPO CREEK	8800	MB	WWH	2.90	0.0	0.30	0.0	3H,	1H,
OH42 15	02-550	RATTLESNAKE CREEK (WEST BRANCH TO LEES CREEK)	8800	MB	EWH	1.10	0.0	6.00	0.0	6H,	11S,14S,65S,
OH42 18	02-563	WILSON CREEK	8800	MB	WWH	0.0	0.0	0.00	1.9	12H, 6H,	2H,
OH43 1	02-500	PAINT CREEK (N. FK. PAINT CREEK TO SCIOTO RIVER)	8800	MB	WWH	0.00	4.80	0.0	3.3	1M, 5M, 3M,12H,	1H,
OH43 20	02-500	PAINT CREEK (LOWER TWIN CR. TO N. FK. PAINT CR.)	8800	EC	EWH	0.0	0.0	0.50	0.0	6H,	90H,
OH43 49	02-540	CLEAR CREEK	8800	MB	EWH	6.40	0.0	3.40	3.50	12H, 5M,	2H,
OH44 5	02-612	PIGEON CREEK (HEADWATERS TO MIDDLE FORK)	8800	MB	WWH	0.0	0.0	0.00	4.2	6H,12H,	2H,65S,55S,
OH44 16	02-610	LITTLE SALT CREEK (HEADWATERS TO BUCKEYE CREEK)	8800	MB	WWH-P	0.0	0.0	0.0	7.3	11H,12H, 6H, 5H,	2H,11H,14H,
OH45 11	02-809	MORGAN FORK	8800	EC	WWH	0.0	0.0	0.00	0.5	5H,	55S,
OH45 14	02-800	SUNFISH CREEK (HEADWATERS TO MORGAN FORK)	8800	EC	WWH	0.0	0.0	0.00	0.5	5H,	55S,
OH45 20	02-022	BIG BEAVER CREEK	8800	MB	WWH	1.90	0.0	21.30	0.0	6H,	51S,55S,
OH45 29	02-001	SCIOTO RIVER (PEEPEE CREEK TO SUNFISH CREEK)	8800	MB	WWH	0.0	0.0	11.20	0.0	12H, 1M,	1H,
OH45 34	02-035	PEEPEE CREEK	8800	EB	WWH	0.0	0.0	0.00	0.5	6H,	10S,40S,20S,
OH46 7	02-700	SCIOTO BRUSH CREEK (MCCULLOUGH CREEK TO SCIOTO R.)	8800	EB	EWH	0.0	0.0	0.0	0.9	6H,	10S,51S,55S,
OH46 23	02-710	S FK SCIOTO BRUSH (SHAWNEE CR. TO SCIOTO BRUSH CR)	8800	MB	EWH	0.0	7.30	1.00	0.0	6H,	51S,55S,
OH46 36	02-722	TURKEY RUN	8800	EC	EWH	0.0	0.0	0.00	0.5	5H,	51S,55S,11S,
OH46 42	02-728	MILL CREEK	8800	EC	EWH	0.0	0.0	0.00	0.5	5H,	51S,55S,11S,
OH46 63	02-700	SCIOTO BRUSH CREEK (RARDEN CREEK TO SOUTH FORK)	8800	EC	EWH	0.0	0.0	0.00	0.5	5H,	51S,55S,11S,
OH46 84	02-001	SCIOTO RIVER (SUNFISH CREEK TO SCIOTO BRUSH CREEK)	8800	MB	WWH	0.0	0.0	17.6	0.0	12H, 1M,	1M,
OH47115	10-508	TURKEY CREEK	8800	EB	WWH	0.0	0.0	13.4	0.0	5H,	83H,
OH48 18.1	10-250	TRIB. TO W. FK. OHIO BRUSH CR. (SEAMAN)	8800	MC	WWH	0.0	0.0	0.00	0.5	6H, 9H,	2H,
OH50 1	11-001	LITTLE MIAMI RIVER (GLADY RUN TO CAESAR CREEK)	8800	EB	EWH	0.0	0.00	0.0	12.8	12H, 6H, 1H,	2H,
OH50 2	11-030	NEWMAN RUN	8800	EB	EWH	0.50	0.0	0.0	3.50	6H,	86H,
OH50 4	11-001	LITTLE MIAMI RIVER (BEAVER CREEK TO GLADY RUN)	8800	EB	EWH	0.0	0.00	0.80	8.20	12H, 6H,	2H,
OH50 5	11-032	GLADY RUN	8800	EB	WWH	0.0	0.0	0.0	4.8	12H, 6H,	2H,40M,
OH50 8	11-035	BEAVER CREEK	8800	EB	WWH	0.0	0.0	0.00	1.1	12H, 6H,	2H,
OH50 9	11-036	LITTLE BEAVER CREEK	8800	EB	WWH	0.0	0.0	0.00	6.3	12H, 6H, 5H,11S,14S,	2H,40M,14S, 1S,
OH50 25	11-044	GILROY DITCH	8800	EB	WWH	5.0	0.0	0.6	1.4	12H, 6H, 7M,	2H,40M,
OH52 3	11-200	TODD FORK (LITTLE EAST FORK TO LITTLE MIAMI RIVER)	8800	EC	EWH	0.0	0.0	0.00	0.5	6H,	11S,16S,65S,
OH52 4	11-203	SECOND CREEK	8800	MB	WWH	0.0	0.0	0.00	7.6	12H, 5M,16S,	2H,71S,65S,
OH52 14	11-212	LYTLE CREEK	8800	MB	WWH	3.40	0.0	1.10	5.60	12H, 6H, 5M, M,15S,16S,	2H,40M,71M,80S,
OH53 1	11-100	E. FK. LITTLE MIAMI R. (STONELICK CR. TO L. MIAMI)	8800	EB	EWH	0.00	2.20	6.6	0.0	12H, 5H,	2H,65S,
OH53 53	11-147	SOLOMON RUN	8800	EB	WWH	1.8	0.0	0.00	2.1	12H, 6H,15M,	2H,80M,
OH53 57	11-151	DODSON CREEK	8800	EB	EWH	0.0	0.0	0.50	0.0	H, 1H,	2H,
OH54 4	11-004	DUCK CREEK	8800	EB	WWH	0.00	0.0	0.0	8.20	12H, 6M,	40H,

Appendix B. (continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq.Attainment Status (Miles) Life Use	Full	Full (Th.)	Partial	Not	Causes	Sources
OH54 7	11-001	LITTLE MIAMI R. (O'BANNON CR. TO E. FK. L. MIAMI)	8800	EB	EWH	0.00	4.60	6.70	1.20	12H, 6M,	2H,
OH54 9	11-007	SYCAMORE CREEK	8800	EB	WWH	0.0	0.0	0.00	0.4	12H, 6H,	2H,
OH54 16	11-001	LITTLE MIAMI RIVER (TURTLE CR. TO O'BANNON CR.)	8800	EB	EWH	0.0	0.0	7.1	2.1	12H, 5H,	1H, 2M,
OH54 20	11-017	SIMPSON CREEK	8800	EC	WWH	0.0	0.0	0.70	0.0	6H,	2H,
OH54 30	11-001	LITTLE MIAMI RIVER (CAESAR CREEK TO TODD FORK)	8800	EB	EWH	5.80	0.0	3.90	2.70	12H, 6H, 5M,	2H, 1H,
OH55 16	14-075	MCKEE CREEK	8800	EB	EWH	0.0	0.0	0.00	0.5	6H,	90H,
OH55 17	14-076	BOKENGEHALAS CREEK	8800	EB	WWH	3.1	0.0	0.00	1.0	5H,16M,12M,	2H,71M,11S,
OH55 18	14-077	BLUEJACKET CREEK	8800	EB	WWH	0.0	0.0	0.60	5.8	5H,16S,12M, M,	2H,71S, 1S,11S,
OH55 19	14-085	OPOSSUM RUN	8800	EB	WWH	0.0	0.0	0.0	1.0	15M, 5H, S,	80M, 2H,40M,
OH55 20	14-001	GREAT MIAMI R. (MUCHINIPPI CR. TO BOKENGEHALAS CR)	8800	EB	WWH	0.0	0.0	6.50	1.90	12H, 6H,16M,	2H,71M,
OH55 35	14-084	CHEROKEE MANS RUN	9002	MB	WWH	0.00	0.00	1.00	0.00	1H,	90H,
OH55 42	14-803	BLACKHAWK RUN	9002	MB	WWH	0.00	0.00	0.00	3.00	15H,16H, 1M,11M, 12M, 9M,	71H,78H,11M,90M,
OH56 1	14-001	GREAT MIAMI RIVER (LOST CREEK TO STILLWATER RIVER)	8800	EB	WWH	12.5	0.0	4.2	0.7	12H, 6M,73S,	2H, 1M,40M,16S,
OH56 1.1	14-093	TRIB. TO GREAT MIAMI RIVER (96.4)	8800	EC	WWH	0.0	0.0	0.0	2.0	6H,12H,	2H,
OH56 3	14-043	HONEY CREEK	8800	EB	EWH	3.40	0.0	6.60	0.0	6H,	11S,16S,
OH56 10	14-001	GREAT MIAMI RIVER (SPRING CREEK TO LOST CREEK)	8800	EB	WWH	6.8	0.0	2.10	0.40	12M, 6H, 5M,16S,	1M, 2H,73S,
OH56 10.3	14-095	B.F. GOODRICH TRIB	9002	MB	WWH	0.00	0.00	0.00	1.00	5H,	1H,
OH56 12	14-001	GREAT MIAMI RIVER (LORAMIE CREEK TO SPRING CREEK)	8800	EB	WWH	6.30	0.0	3.20	1.10	12H, 6H, 5H,14S,16S,	1H, 2H,73S,40M,
OH57 1	14-200	STILLWATER RIVER (BRUSH CREEK TO GREAT MIAMI R.)	8800	EB	EWH	0.0	0.0	10.5	3.7	12H, 6M,	2H,40M,40S,
OH57 1.1	14-242	TRIB. TO STILLWATER RIVER (RM 11.7)	8800	EC	WWH	0.0	0.0	0.00	0.5	12H, 6H,	2H,
OH57 5	14-200	STILLWATER RIVER (LUDLOW CREEK TO BRUSH CREEK)	8800	EB	EWH	3.6	0.0	3.0	0.2	12H, 6M,	2H,
OH57 7	14-210	LUDLOW CREEK	8800	EB	WWH	0.30	0.0	12.80	0.40	5H,	1H,
OH57 26	14-220	GREENVILLE CREEK (WEST BR. TO DIVIDING BR.)	8800	EB	EWH	0.0	0.0	1.9	7.2	12H, 6M,16S,	2H,40M, 1S,73S,
OH57 37	14-200	STILLWATER RIVER (SWAMP CREEK TO GREENVILLE CREEK)	8800	EB	EWH	0.0	0.0	4.9	8.6	12H, 1M,	2H,63M,
OH57 39	14-219	BALLINGER RUN	8800	EB	WWH	0.0	0.0	0.0	2.0	12H, 6M,	40H,65M, 2M,62S, 11S,14S,
OH57 41	14-235	SWAMP CREEK	8800	EB	WWH	0.0	0.0	0.50	4.00	12H, 6M,16M, S,	2H,71M,11S,76S,
OH58 1	14-100	MAD RIVER (MUD RUN TO GREAT MIAMI RIVER)	8800	MB	WWH	0.4	0.0	9.00	0.70	12H,16M, S, 6M,	2H,71M, 1S,40S,
OH58 4	14-100	MAD RIVER (DONNELS CREEK TO MUD RUN)	8800	MB	WWH	0.0	0.0	8.3	0.0	1H,12M,	2H,
OH58 11	14-100	MAD RIVER (BUCK CREEK TO DONNELS CREEK)	8800	MB	WWH	0.0	0.0	2.10	5.60	12H, 1M, 6M,	2H,
OH58 24.1	14-143	KENTON CREEK	8800	MB	WWH	0.0	0.0	0.0	5.0	12H, 6H,15M,	2H,80M,
OH58 25	14-120	CHAPMAN CREEK	8800	MB	WWH	0.00	0.50	0.00	4.00	11H, 6M, 5S,	63H,
OH58 42	14-140	ST. PARIS TRIBUTARY	8800	EB	WWH	0.0	0.0	0.00	2.6	12H, 6H,	2H,14S,
OH58 48	14-100	MAD RIVER (MACOCHEE CREEK TO KINGS CREEK)	8800	MB	CWH	0.00	5.40	2.6	0.0	5H,12S,	84H, 2S,

Appendix B. (continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq.Attainment Status (Miles) Life Use	Full	Full (Th.)	Partial	Not	Causes	Sources
OH59 2.1	14-516	REIGLE DITCH	8800	MB	WWH	0.0	0.0	1.6	0.4	12H, 6H,15M,	2H,80M,
OH60 1	14-001	GREAT MIAMI RIVER (FOURMILE CREEK TO RM 26.6)	8800	EB	WWH	0.0	0.0	1.00	11.80	12M, 5H,15S, 3S,16M, 8H,	1M, 2M,40S,74S, 66H,73M,
OH60 9	14-001	GREAT MIAMI RIVER (DICKS CREEK TO FOURMILE CREEK)	8800	EB	WWH	0.0	0.0	2.9	6:3	12H, 5H, 8S,	1H, 2H,
OH60 14	14-018	DICKS CREEK	8800	MB	MWH-P	5.20	0.0	2.6	2.7	5H,11M,16M, 1M, 9S,	1H,71M,77M,
OH60 18	14-001	GREAT MIAMI RIVER (TWIN CREEK TO DICKS CREEK)	8800	EB	WWH	0.0	0.0	0.80	9.00	12H, 5H, M,15S, 6M,16S,	1H, 2H,74S,73S,
OH60 22.1	14-094	TRIB. TO CLEAR CREEK (RM 7.1)	8800	EC	WWH	0.0	0.0	0.00	0.5	6H,	2H,
OH60 27	14-029	BEAR CREEK	8800	EB	WWH	7.20	0.0	0.00	2.90	6H,12H,	2H,65S,
OH60 33	14-001	GREAT MIAMI RIVER (WOLF CREEK TO BEAR CREEK)	8800	EB	WWH	1.2	0.0	4.3	7.1	12H, 5H, 6M,16S,	2H,73S,40M,
OH60 41	14-001	GREAT MIAMI RIVER (STILLWATER RIVER TO WOLF CREEK)	8800	EB	WWH	0.0	0.0	2.4	0.0	12H, 5H, 6H,16S,	40H, 1M,73S,
OH61 12	14-410	SEVENMILE CREEK (PAINT CREEK TO FOURMILE CREEK)	8800	EB	EWH	1.00	0.0	0.00	0.30	6H,	11S,14S,65S,
OH61 24	14-400	FOURMILE CREEK (L. FOURMILE CR. TO SEVENMILE CR.)	8800	EB	WWH	12.5	0.00	1.30	1.20	H, 6H, 7S,	2H,
OH62 15	14-006	BLUEROCK CREEK	8800	MB	WWH	0.0	0.0	0.50	0.00	12H, 1H,	2H,40S,
OH62 23	23-001	MILL CREEK (WEST FORK MILL CREEK TO OHIO RIVER)	8800	EC	LWH	0.0	0.0	0.0	11.6	12H, 1H,20H,19H,16H,	2H, 1H,40H,40M,77M,
OH62 30.1	23-010	GLENDALE TRIB.	8800	EC	WWH	0.0	0.0	0.0	2.0	12H, 6M,	2H,
OH63 4	22-100	BEAVER CREEK (GRAND LAKE ST. MARYS TO WABASH R.)	8800	MB	WWH	0.0	0.0	0.00	10.4	12H,16M, 6M,	2H,71M,16S,
OH63 19.1	22-012	TRIB. TO WABASH RIVER	8800	MC	LRW-P	0.0	0.0	0.0	1.0	5H,12H,	1H,85H,16M,
OH64 18	04-500	ST. MARYS RIVER (MIAMI/ERIE CANAL TO SIXMILE CR.)	8800	EC	WWH	0.0	0.0	0.0	11.0	5H,12M, 6M,16S,	2H,11M,71S,65S,
OH64 25	04-500	ST. MARYS RIVER (GRAND LAKE TO ST. MARYS)	8800	EC	WWH	0.0	0.0	0.0	1.8	12H, 5M,	2H,11S,65S,
OH64 26	04-524	KOPP CREEK	8800	EB	WWH	0.0	0.0	0.0	12.0	16H,12H,11M, 6M,	71H,11M,16M,84M, 2H, 1H,
OH64 27	04-525	WIERTH DITCH	8800	EB	WWH	0.0	0.0	0.0	5.00	12H,16H, 6M,	2H, 1M,11M,71H,
OH65 21	04-400	ST. JOSEPH RIVER (FISH CREEK TO OH/IND. BORDER)	8800	EC	WWH	0.0	0.0	0.50	0.0	5H,	1H,
OH65 34	04-411	EAGLE CREEK	8800	MB	WWH	0.50	0.0	0.50	0.0	12H, 5M,	1H,11S,
OH65 36	04-413	NETTLE CREEK	8800	MC	WWH	0.0	0.0	0.50	0.0	5H,12S,	1H,11S,
OH65 38	04-418	JOHN LATTANER DITCH	8800	MC	LRW	0.0	0.0	0.0	4.0	12H, 5M,16S,	1H,71M,
OH66 3	04-160	BLANCHARD (EAGLE CREEK TO OTTAWA CREEK)	9002	MB	WWH	0.00	0.00	8.90	3.20	16H,12H, 9H, 5M,19M,	73H, 4H, 2H,
1M,71H,40M, 5M,43										11M	
OH66 4	04-224	OIL DITCH	8800	MB	LRW	0.0	0.0	0.0	5.0	1H,12H,19H,	1H,
OH66 4.1	04-251	COOPER TIRE DITCH TO OIL DITCH (FINDLAY)	8800	EC	LRW	0.0	0.0	0.00	0.5	12H, 6H,	65H,
OH66 19	04-196	POTATO RUN	8800	EC	WWH	0.0	0.0	0.00	0.5	6H,12M, 9S,	65H,40M,
OH67 1	04-160	BLANCHARD RIVER (CRANBERRY CREEK TO AUGLAIZE R.)	8800	EC	WWH	0.0	0.0	0.0	17.3	12H, 5M,16M,	2M,86H,11S,
OH67 6	04-160	BLANCHARD RIVER (RILEY CREEK TO CRANBERRY CREEK)	8800	EB	WWH	0.0	0.0	12.8	0.0	12H, 5M,11M,16S,	2M,86H,11S,
OH68 1	04-200	OTTAWA RIVER (SUGAR CREEK TO AUGLAIZE RIVER)	8800	MB	WWH	0.0	0.0	0.0	6.6	12H, 1M,	1H, 2H,
OH68 4	04-203	SUGAR CREEK	8800	MB	WWH	0.00	5.40	8.10	15.40	1H,15H,12H,	1H,86H,11S,

Appendix B. (continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH68 4.2	04-225	TRIB. TO SUGAR CREEK (MR 18.8)	8800	MB	WWH	0.0	0.0	0.0	2.0	5H,12H, 6M, 1H,	1H,85H,84H,
OH68 8	04-200	OTTAWA RIVER (HONEY RUN TO SUGAR CREEK)	8800	MB	WWH	0.0	0.0	0.0	16.3	12H, 1H, 6S,	2H, 1H,
OH68 9	04-207	LEATHERWOOD DITCH	8800	EB	WWH	1.00	0.0	0.0	3.00	12H, 6H,	21H,11H,71S,
OH68 11	04-200	OTTAWA RIVER (LITTLE OTTAWA RIVER TO HONEY RUN)	8800	MB	WWH	0.0	0.0	0.0	12.4	1H,12M, 6M,	1H, 2H, 4M,
OH68 17	04-200	OTTAWA RIVER (HOG CREEK TO LITTLE OTTAWA RIVER)	8800	MB	WWH	1.7	0.0	0.1	13.6	1H,12M,16M,15M, 6M,	2H, 1H, 4M,73M,74M,
OH68 17.2	04-246	TRIB. TO OTTAWA RIVER (RM 41.5)	8800	MC	WWH	0.0	0.0	0.50	0.0	5H,	1H,
OH69 3	04-132	WEST BRANCH (HOAGLIN CREEK TO PRAIRIE CREEK)	8800	EB	WWH	0.0	0.0	0.0	6.0	16H, 6H,12H, 5M,	71H,63M,65H,11S,
OH69 8	04-137	HAGERMAN CREEK	8800	EB	WWH	1.0	0.0	0.0	17.0	16H,12H, 6H,	71H, 2H,11S,
OH69 10	04-138	DRY CREEK	8800	EC	WWH	0.0	0.0	0.00	2.8	12H, 6H, H,	65H,84H,11S,
OH69 15	04-143	TOWN CREEK	8800	EB	WWH	0.0	0.0	8.60	14.80	16H,15H,12M, 6M, M, 5M,	71H,80M, 2M,40M, 1M,
OH69 20	04-130	LITTLE AUGLAIZE RIVER (EVANS DITCH TO DOG CREEK)	8800	EB	WWH	7.10	0.00	3.60	14.70	16H,12M,15H, 6M, 2S,11M	71H,76H,77H, 2S,11M,
OH69 20.1	04-159	EVANS DITCH	8800	MB	LRW	2.20	0.0	0.0	0.90	5H,12H,	1H,65H,
OH69 27	04-153	LONG PRAIRIE CREEK	8800	EB	WWH	1.60	0.0	0.0	7.20	16H,12H, 6H,	71H, 2H,11S,
OH70 1	04-100	AUGLAIZE RIVER (BLANCHARD R. TO L. AUGLAIZE R.)	8800	MB	WWH	0.0	0.0	0.0	9.7	16H, 5M,12M,11S,	17M, 2M,11S,
OH70 3	04-100	AUGLAIZE RIVER (OTTAWA RIVER TO BLANCHARD RIVER)	8800	MB	WWH	0.0	0.0	0.0	7.1	6H,12H,	2H, 1H,11S,
OH70 5	04-100	AUGLAIZE RIVER (JENNINGS CREEK TO OTTAWA RIVER)	8800	MB	EWH	0.0	0.0	7.3	0.0	6H,12H,	1H, 2M,11S,
OH70 12	04-100	AUGLAIZE RIVER (SIXMILE CREEK TO JENNINGS CREEK)	8800	MB	EWH	0.0	0.0	1.70	13.60	6H,12H,	1H, 2M,82H,11S,
OH70 14	04-128	SIXMILE CREEK	8800	MB	WWH	0.0	0.0	0.0	6.0	6H, 5H,12H,	1H, 2M,40S,
OH71 6	04-114	SOUTH POWELL CREEK	8800	MB	WWH	0.0	0.0	0.00	3.6	16H,12M,11M, 6M, 3S,	71H,86M, 2M,11S,
OH71 6.1	04-072	TRIB. TO SOUTH POWELL CREEK	8800	MB	WWH	0.0	0.0	0.0	1.0	6H,12M,16M,11M,15S,	2H,11M,80S,
OH71 19	04-100	AUGLAIZE RIVER (L. AUGLAIZE R. TO FLATROCK CREEK)	8800	MB	WWH	0.0	0.0	0.0	5.4	15H,16M, 5M,12M,11S,	74H,71M, 2M,11S,
OH71 20.1	04-073	DISHER DITCH	8800	MB	WWH	0.20	0.0	0.00	1.80	12H, 6M,16S,	2H,11M,65M,71S,
OH72 11	04-633	PRAIRIE CREEK	8800	MB	WWH	0.0	0.0	0.00	12.1	5H, 6M,12M,16M, M,11S,	1H, 2H,40M,71M,11S,
OH72 11.7	04-639	TRIB. TO PRAIRIE CREEK (RM 11.0)	8800	EC	WWH	0.0	0.0	0.0	0.5	5H, M,	1H, 2M,40M,
OH72 21.1	04-637	TRIB. TO BEAVER CREEK (RM 14.2)	8800	EC	WWH	0.0	0.0	0.00	0.5	12H, 6M,11S,	2H,40M,11M,71M,65S,
OH73 1.1	04-092	TRIB. TO BAD CREEK (RM 14.4)	8800	MC	WWH	0.0	0.0	0.00	0.5	12H, 6M,	90H,
OH73 16	04-037	NORTH TURKEYFOOT CREEK	8800	EB	WWH	0.0	0.0	0.0	25.0	12H, 5M,15S,	2H,86S,11S,
OH73 16.1	04-094	TRIB. TO NORTH TURKEYFOOT CR. (RM 1.6)	8800	EC	WWH	0.0	0.0	0.50	0.0	6H, 5M,12S,	90H,
OH73 16.3	04-083	TRIB. TO NORTH TURKEYFOOT CR. (RM 18.4)	8800	MC	WWH	0.8	0.0	0.0	0.2	6H, 9H,	2H,
OH73 26	04-001	MAUMEE RIVER (AUGLAIZE RIVER TO WADE CREEK)	8800	MB	WWH	2.50	0.0	5.9	3.50	16M,12H, 5M,11S,	2H, 1M,11S,73M,40M,
OH75 1	04-001	MAUMEE RIVER (WATERVILLE TO SWAN CREEK)	8800	MB	WWH	0.4	0.0	1.3	19.00	12H,11S, 3H, 5S,	1H
OH75 2	04-002	DUCK CREEK	8800	MB	WWH	1.30	0.0	0.0	1.90	5H,12M,	63H,65S,
OH75 3	04-003	SWAN CREEK (BLUE CREEK TO MAUMEE RIVER)	8800	MB	WWH	0.0	0.0	0.0	22.2	5H,12M,19H, 3M,	40H,84M,
OH75 16	04-300	OTTAWA RIVER	8800	MB	WWH	0.0	0.0	0.0	19.8	3H,12M,16M,11M, 1M,	66H,40M, 1M,11S,85M,
OH75 22.1	04-093	TRIB. TO BEAR CREEK (RM 12.3)	8800	MC	WWH	0.0	0.0	0.00	0.5	6H,	2H,11M,

Appendix B. (continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Attainment Status (Miles) Life Use	Full	Full (Th.)	Partial	Not	Causes	Sources
OH76 11	16-205	CRANE CREEK	8800	EC	WWH	0.0	0.0	0.00	0.5	12H, 5M,	11S,65S,
OH76 12	16-206	AYERS CREEK	8800	EC	WWH	0.0	0.0	0.0	6.0	12H, 5M,	11S,65S,
OH76 14	16-208	HENRY CREEK	8800	EC	WWH	0.0	0.0	0.0	9.0	5H,12M,	11S,65S,
OH76 24	16-200	OTTER CREEK	8800	MB	WWH	0.0	0.0	0.0	8.0	5H, 1H, 8H, 3M,	1H,85H,63H,61S,
OH77 4	16-103	ROCKY FORD	8800	MB	WWH	5.1	0.0	0.0	17.8	6H,12H, 5H,	2H, 1H,11S,
OH77 4.2	16-107	AIR PRODUCTS TRIB.	8800	MB	WWH	0.50	0.0	0.0	1.50	5H,12M,	1H,
OH77 8	16-105	EAST BRANCH PORTAGE RIVER	9001	MB	WWH	0.00	0.00	0.00	18.00	12H, 1M,15M,	4H, 2M, M,
OH80 17	05-001	SANDUSKY RIVER (UNNAMED TRIB. TO BROKEN SWORD CR.)	8800	EB	WWH	0.0	0.0	4.50	17.30	12H, 6M, 7S, 5S,	2H,40H,40S,
OH80 20	05-001	SANDUSKY RIVER (HEADWATERS TO UNNAMED TRIB.)	8800	EB	WWH	0.0	0.0	3.40	10.20	12H, 6M,11M,	2H,40H,40M,11M,65S,
OH80 22	05-042	PARAMOUR CREEK	8800	MB	WWH	0.0	0.0	0.2	9.4	12H, 6H,16H, 5M,11M, 19S,2H,40M,	40S,11M,71H,
OH80 23	05-055	CRESTLINE WWTP TRIBUTARY	8800	MB	WWH	0.0	0.0	0.0	4.0	12H, 5M, 6M,	1H,40M,40S,85H,
OH80 24	05-056	CRESTLINE TRIBUTARY	8800	MB	WWH	0.0	0.0	0.0	4.0	19H,16M, 5M,11M,	40H, H,71M,77M, 1H,85H,
OH81 2	05-010	SUGAR CREEK	9002	MB	WWH	1.10	0.00	2.20	0.10	3H,	1H,
OH81 13	05-200	HONEY CREEK (BROKEN KNIFE CREEK TO SILVER CREEK)	8800	MB	WWH	0.0	0.0	0.0	18.0	1H,	11H,
OH82 21	05-219	MUDDY CREEK (GRIES DITCH TO SANDUSKY BAY)	8800	EB	WWH	2.80	0.0	11.10	6.20	12H, 6M,16S,11S,	2H,11M,71S,
OH83 1	05-052	PIPE CREEK	8800	EB	WWH	0.0	0.0	1.50	1.10	16H, 5M,11M,	71H,85M, 1M,11S,40S,
OH83 3	05-051	MILLS CREEK	8800	MB	WWH	0.0	0.0	0.0	11.7	6H,12H, H, 5M,85M,	1H, 2H,16S,85M,
OH83 3.3	05-058	CASWELL DITCH	8800	MB	WWH	0.0	0.0	4.0	0.0	5H,	90H,
OH83 3.4	05-057	SNYDERS DITCH	8800	MB	WWH	0.0	0.0	0.0	6.0	6H,12H, 5M,	2H,85H,
OH83 11	05-045	RACCOON CREEK	8800	MB	WWH	0.0	0.0	0.00	11.9	H,12H, 5M,	1H, 2M,21S,65S,
OH83 11.2	05-054	BUCK CREEK	8800	EB	WWH	0.50	0.0	0.0	4.50	2H,	13H,
OH85 3	20-003	BEAVER CREEK	8800	EC	WWH	0.0	0.0	0.00	1.4	12M, 6H,	2H,11S,
OH85 16	21-006	BUCK CREEK	8800	MB	WWH	0.0	0.0	1.10	7.20	6H,	86H,
OH86 2	20-001	BLACK RIVER	8800	EB	WWH	0.0	0.0	0.0	16.0	M, 3H, 5M, 6H,12H,19M,	1H, 2H,85H,40M,
OH86 14	20-021	PLUM CREEK	8800	MB	WWH	0.0	0.0	0.0	8.0	12H, 7H,11M,15S,	2H,63M,80S,40S,
OH87 2	13-001	ROCKY RIVER	8800	EB	WWH	0.0	0.0	10.40	0.0	12H, 6M, 5M,	2H, 1M,40S,
OH87 3	13-002	ABRAM CREEK	8800	EB	WWH	0.0	0.0	0.0	7.4	12H, 6H, 5M,	2H,63M,
OH87 4	13-100	EAST BRANCH ROCKY RIVER (HEALEY CREEK TO ROCKY R.)	8800	EB	WWH	7.0	0.0	7.10	2.90	12M, 6H, 5H,	2H,40H,40S,
OH87 5	13-101	BALDWIN CREEK	8800	EB	WWH	0.0	0.0	0.0	9.2	12H, 6M,	2H,40S,
OH87 10	13-200	WEST BRANCH ROCKY RIVER (PLUM CR. TO EAST BRANCH)	8800	EB	WWH	0.0	0.0	2.40	0.70	6H,12M, 5S,	2H,40S,
OH87 12	13-200	WEST BRANCH ROCKY RIVER (COSSETT CR. TO PLUM CR.)	8800	EB	WWH	4.9	0.0	1.0	10.6	12H, H, 6M,	2H,73M,11S,
OH87 15	13-200	WEST BRANCH ROCKY RIVER (NORTH BR. TO COSSETT CR.)	8800	EB	WWH	12.3	0.0	4.1	2.0	5H,12M,	63H,
OH87 18.1	13-213	EAST BRANCH MONTVILLE LANDFILL TRIB.	8800	MC	WWH	0.0	0.0	0.0	0.5	6H,12H,	63H,

Appendix B. (continued).

Waterbody ID No.	River Code	Waterbody Name	Assessment Date	Assessment Type	Aq. Life Use	Attainment Status (Miles) Full	Full (Th.)	Partial	Not	Causes	Sources
OH87 18.2	13-214	WEST BRANCH MONTVILLE LANDFILL TRIB.	8800	MC	WWH	0.0	0.0	0.0	0.5	6H,12H,	63H,
OH88 1	19-030	L. CUYAHOGA R. (WINGFOOT LAKE OUT. TO CUYAHOGA R.)	8800	MB	WWH	0.0	0.0	0.80	10.20	12H, 1H, 5H,	1H,40H,85H,40S,
OH88 1.1	19-051	CAMP CREEK	8800	MB	WWH	0.0	0.0	0.00	1.6	1H,	40H,40M, 1S,
OH88 2	19-031	SPRINGFIELD LAKE OUTLET	8800	MB	WWH	0.0	0.0	0.0	3.7	6H,12H,15H,19H,	1H,80H, H,84H,
OH88 3	19-032	WINGFOOT LAKE OUTLET	8800	MB	WWH	0.0	0.0	0.0	3.2	1H,	1H,84H,
OH88 5	19-001	CUYAHOGA RIVER (CONGRESS LAKE OUT. TO L. CUYAHOGA)	9002	MB	WWH	0.00	0.00	0.80	10.30	12H,16M,15M,14S, 3M,	73H,74M, 2M,
1S,42H,85M,											
OH88 8.1	19-044	BRIMFIELD DITCH	8800	MB	WWH	0.0	0.0	0.00	0.5	6H,	90H,
OH89 1	19-001	CUYAHOGA RIVER (BIG CREEK TO LAKE ERIE)	8800	MB	WWH	0.0	0.0	0.0	5.5	12H, 5H, 6H, 8H, 3M,16H,	1H, 2M,40S,
											40H,72H,85H,
OH89 2	19-002	KINGSBURY RUN	8800	EC	WWH	0.0	0.0	0.00	0.5	5H, 3H,	85H,84H,40S,
OH89 5	19-005	BIG CREEK	8800	MB	LWH	0.0	0.0	0.00	8.4	12H, 5M,19S,	40H, 1M,40S,
OH89 6	19-001	CUYAHOGA RIVER (TINKERS CREEK TO BIG CREEK)	9002	MB	WWH	0.00	0.00	0.00	9.20	6H, 1M, 5M, 7M,	2H,85H, 1M,
OH89 8	19-007	TINKERS CREEK (POND BROOK TO CUYAHOGA RIVER)	8800	MB	WWH	0.0	0.0	0.0	22.50	12H, 5H,	2H, 1S, 2H,40S,
OH89 8.2	19-048	DEER LICK RUN	8800	MB	LRW	0.0	0.0	0.0	3.0	5H, 6M,12M,	1H,
OH89 8.3	19-046	BEAVER MEADOW CREEK	8800	MB	WWH	0.0	0.0	0.00	1.2	12H, 5M,	2H, 2M,
OH89 10	19-008	POND BROOK	8800	MB	WWH	0.0	0.0	0.0	4.8	12H, 6M,16M,15M,	2H,71M,86M,40S,
OH89 11	19-001	CUYAHOGA RIVER (BRANDYWINE CREEK TO TINKERS CREEK)	9002	MB	WWH	0.00	0.00	0.00	7.80	1H,12M,	2H,
OH89 12	19-009	CHIPPEWA CREEK	8800	MB	WWH	0.0	0.0	0.00	0.5	6H,	14S,40S,
OH89 14	19-001	CUYAHOGA RIVER (YELLOW CREEK TO BRANDYWINE CREEK)	9002	MB	WWH	0.00	0.00	0.00	13.00	12H, 1M,	2H,
OH89 24	19-020	FURNACE RUN	8800	MB	WWH	0.50	0.0	0.10	0.00	6H,	90H,
OH89 27	19-001	CUYAHOGA RIVER (LITTLE CUYAHOGA R. TO YELLOW CR.)	9002	MB	WWH	0.00	0.00	0.00	5.10	12H, 1M,	42H, 5M,
OH89 30	19-025	POWERS BROOK	8800	MB	WWH	0.0	0.0	0.00	1.3	12H, 6M,	2H,
OH89 32	19-001	CUYAHOGA RIVER (BIG CREEK TO SHIP CHANNEL (5.	8800	M	WWH	0.0	0.0	0.0	1.7	12H, 5H, 6H, 8H, 3M,	1H, 2M,40S,
											40H,85H,77S,
OH90 9	15-004	WILLEY CREEK	8800	MC	EWH	0.00	0.50	0.00	0.5	1H,12M,	2H,
OH90 12	15-001	CHAGRIN RIVER (HEADWATERS TO AURORA BRANCH)	9002	MB	WWH	0.00	22.00	0.90	0.00	12H, 5H,	1H,85H,
OH90 16	19-041	EUCLID CREEK	9002	MB	WWH	0.00	0.00	0.00	9.50	12H,16H, 6M, 5M,	4H, 2M,71H,65S,84M,
OH91 1	03-130	ROCK CREEK (LEBANON CREEK TO GRAND RIVER)	8800	MB	WWH	0.9	0.0	0.20	1.50	12H, 6M,	2H,65S,
OH92 1.1	03-001	GRAND RIVER (ESTUARY)	9003	MB	WWH	0.80	0.00	4.20	0.00	13H, 5H, 1S,16S,	63H,43M,10S,
OH92 16	03-001	GRAND RIVER (MILL CREEK TO PAINE CREEK)	8800	MB	WWH	1.0	0.0	8.3	0.0	6H,	90H,
OH93 2	07-200	TURKEY CREEK	8800	EC	CWH	0.0	0.0	0.0	1.3	5H,	86H,55S,
OH93 3	07-100	CONNEAUT CREEK (OH./PA. BORDER TO LAKE ERIE)	8800	EC	CWH	0.0	0.0	0.00	6.4	5H,12S,	2H,85S,40S,63S,65S,
OH93 5	07-001	ASHTABULA RIVER	8800	EB	WWH	1.7	0.0	0.00	6.0	5H, 3M,12M, 8S,19S,20S,	1H,85H,40M,40S,63M,
OH93 6	07-010	FIELDS BROOK	8800	MC	LWH	0.0	0.0	0.0	6.0	5H, 3M,14S, 7S,	1H,85H,40S,63M,

Appendix C. Ohio stream and river segments that are fully meeting their aquatic life uses (where assessed) and length of the assessed portion of the segment that is fully meeting aquatic life uses or fully meeting, but threatened.

WBID	Waterbody Description	River Code	Assess-ment Date[1]	Sampling Date[1]	Data Type[2]	Aquatic Life Use Miles Meeting	Aquatic Life Use Miles Threatened	Aquatic Life Use[3]	TH[4]
OH26 36	HOCKING RIVER (SCOTT CREEK TO MONDAY CREEK)	01-001	9002	8809	MB	0.00	2.00	WWH	*
OH26 1	HOCKING RIVER (MONDAY CREEK TO ATHENS)	01-001	9002	8809	MB	1.10	0.00	WWH	
OH26 42.1	TRIB. TO OLDTOWN CREEK (GENERAL ELECTRIC)	01-049	8800	8600	MC	0.5	0.0	WWH	
OH27 14	FEDERAL CREEK (MCDOUGALL BRANCH TO HOCKING R)	01-100	8800	8400	MB	0.5	0.0	LWH	
OH27 24.1	SULPHUR RUN	01-134	8800	7900	EC	0.5	0.0	WWH	
OH27 24	SHARPS FORK	01-160	8800	8300	EC	0.5	0.0	EWH	
OH27 25.1	TRIB. TO OPOSSUM RUN (RM 1.0)	01-164	8800	7900	EC	0.5	0.0	WWH	
OH26 14	WEST BRANCH SUNDAY CREEK	01-240	8800	7900	EC	0.5	0.0	WWH	
OH26 26.1	TRIB. TO SNOW FORK (RM 6.7)	01-314	8800	7900	EC	0.5	0.0	WWH	
OH25 7	MUDDY PRAIRIE RUN	01-420	8800	8200	EB	1.2	0.0	WWH	
OH25 9	MUDDY PRAIRIE CREEK	01-450	8800	8200	EC	0.5	0.0	WWH	
OH25 14	TURKEY RUN	01-520	8800	8200	EB	1.9	0.0	WWH	
OH25 21.1	SOMERSET CREEK	01-551	8905	8909	MB	7.00	0.00	WWH	
OH25 21.5	TRIB. TO SOMERSET CREEK (RM 2.7)	01-552	8800	7900	EC	0.5	0.0	WWH	
OH25 21.4	TRIB. TO SOMERSET CREEK (RM 1.8)	01-553	8800	7900	EC	0.5	0.0	WWH	
OH25 21.3	TRIB. TO SOMERSET CREEK (RM 1.2)	01-554	8800	7900	EC	0.5	0.0	WWH	
OH25 21.2	TRIB. TO CENTER BRANCH (RM 2.3)	01-555	8800	7900	EC	0.5	0.0	WWH	
OH25 21.6	TRIB TO CENTER BRANCH (RM 2.1)	01-556	8800	7900	E	0.5	0.0	WWH	
OH40 1	SCIOTO RIVER (WALNUT CREEK TO BIG DARBY CR.)	02-001	9002	8809	MB	0.00	5.30	EWH-P	*
OH45 21	LITTLE BEAVER CREEK	02-023	8800	8500	MB	3.3	0.0	WWH	
OH40 4	WALNUT CREEK (LITTLE WALNUT CREEK TO SCIOTO R	02-078	8800	8200	EB	5.5	0.0	WWH	
OH40 13	WALNUT CREEK (SYCAMORE CREEK TO GEORGE CREEK)	02-078	8800	8200	EB	8.00	0.0	WWH	
OH40 5	LITTLE WALNUT CREEK	02-079	8800	8600	MB	11.1	0.0	WWH	
OH38 18	BIG WALNUT CREEK (ROCKY FORK TO ALUM CREEK)	02-100	8800	8600	MB	4.5	0.0	WWH	
OH38 36	BIG WALNUT CREEK (REYNOLDS RUN TO CULVER CR.)	02-100	9001	8809	MB	6.00	0.00	WWH	
OH38 20	BIG WALNUT CREEK (HOOVER DAM TO ROCKY FORK)	02-100	9002	8909	MB	0.00	4.00	WWH	*
OH35 9	MILL CREEK (HEADWATERS TO OTTER RUN)	02-109	8800	8600	MB	6.2	0.0	WWH	
OH35 7	PHELPS RUN	02-132	8800	8600	EC	0.5	0.0	WWH	
OH35 15	BOKES CREEK (BRUSH CREEK TO SCIOTO RIVER)	02-138	8800	8300	EC	0.5	0.0	WWH	
OH34 26	SILVER CREEK	02-182	8800	8400	MB	4.5	0.0	WWH	
OH40 17	CARROLL UNNAMED TRIB.	02-199	8800	8200	EB	0.50	0.0	WWH	
OH39 26	BIG DARBY CREEK (SPAIN CREEK TO BUCK RUN)	02-200	9002	8909	MB	0.00	10.60	EWH	*
OH39 2	BIG DARBY CREEK (HELLBRANCH RUN TO DARBYVILLE	02-200	8905	8809	MB	13.70	0.00	EWH	
OH39 6	HELLBRANCH RUN	02-204	8800	8100	EB	0.00	12.80	WWH	*
OH39 30	PLEASANT RUN	02-221	9002	8909	MB	3.00	0.00	WWH	
OH39 31.1	SPAIN CREEK	02-222	9002	8909	MB	4.00	0.00	WWH	
OH34 1.3	NORTH ROCKSWALE DITCH	02-237	8800	8700	MB	3.0	0.0	MWH-P	
OH41 7	DEER CREEK (HAY RUN TO SCIOTO RIVER)	02-300	8800	8700	MC	7.2	0.0	WWH	
OH41 12	DEER CREEK (DEER CREEK DAM TO DRY RUN)	02-300	8800	7900	EC	7.0	0.0	WWH	
OH41 30	DEER CREEK (HEADWATERS TO OAK RUN)	02-300	8800	8500	MB	1.2	0.0	WWH	
OH41 8	WAUGH RUN	02-301	8800	7900	EC	5.5	0.0	WWH	
OH41 10	STALL RUN	02-303	8800	7900	EC	1.7	0.0	WWH	
OH41 13	DRY RUN	02-304	8800	7900	EC	6.0	0.0	WWH	
OH41 14	BUSKIRK CREEK	02-305	8800	7900	EC	5.3	0.0	WWH	
OH41 17	GEORGES RUN	02-307	8800	8300	EC	2.5	0.0	WWH	
OH41 32	NORTH FORK DEER CREEK	02-319	8800	8300	EC	4.0	0.0	WWH	
OH43 27	PAINT CREEK (ROCKY FORK TO LOWER TWIN CREEK)	02-500	9003	8910	MB	8.70	0.00	EWH	
OH42 1	PAINT CREEK (UPPER RESERVOIR TO ROCKY FORK)	02-500	9003	8910	MB	5.00	0.00	EWH	
OH42 24	PAINT CREEK (SUGAR CREEK TO UPPER PAINT CREEK	02-500	9003	8910	MB	9.60	0.00	EWH-P	
OH43 2	NORTH FORK PAINT CREEK (LITTLE CREEK TO PAINT	02-510	8800	8500	MB	1.10	0.0	WWH	
OH43 8	NORTH FORK PAINT CREEK (COMPTON CR. TO LITTLE	02-510	8800	8500	MB	12.6	0.0	WWH	

Appendix C. (continued).

WBID	Waterbody Description	River Code	Assess-ment Date	Sampling Date	Data Type	Aquatic Life Use Miles Meeting	Aquatic Life Use Miles Threatened	Aquatic Life Use	TH[1]
OH43 15	COMPTON CREEK (HEADWATERS TO NORTH FK. PAINT	02-522	8800	8300	EB	1.0	0.0	WWH	
OH43 38	ROCKY FORK (ROCKY FORK LAKE TO PAINT CREEK)	02-530	8800	8000	EC	9.0	0.0	EWH	
OH43 50	HUSSEY RUN	02-541	8800	8300	EC	0.5	0.0	EWH	
OH43 49.3	MOBERLY BRANCH CLEAR CREEK	02-585	8800	8500	MB	0.5	0.0	WWH	
OH43 49.1	COON CREEK	02-588	8800	8300	EC	0.5	0.0	WWH	
OH43 49.4	TRIB. TO CLEAR CREEK (RM 8.5)	02-589	8800	8200	EC	0.5	0.0	WWH	
OH44 19	SALT CREEK (PIKE RUN TO LITTLE SALT CREEK)	02-600	8800	8400	MB	9.6	0.0	EWH	
OH44 33	SALT CREEK (LAUREL RUN TO QUEER CREEK)	02-600	8800	8400	MB	7.7	0.0	EWH	
OH46 51	BLUE CREEK	02-737	8800	7900	EC	0.5	0.0	EWH	
OH45 3	CHENOWETH FORK	02-802	8800	7900	EC	0.5	0.0	WWH	
OH91 25	GRAND RIVER (MUD CREEK TO COFFEE CREEK)	03-001	8800	8400	MB	9.5	0.0	WWH	
OH92 20	GRAND RIVER (MILL CREEK TO MILL CREEK)	03-001	8800	8700	MB	17.7	0.0	WWH	
OH91 14	GRAND RIVER (COFFEE CREEK TO HOSKINS CREEK)	03-001	8800	8300	EB	0.5	0.0	EWH-P	
OH92 2	BLACK BROOK	03-002	8800	8400	EC	2.0	0.0	WWH	
OH91 24	COFFEE CREEK	03-021	8800	8100	EC	6.4	0.0	WWH	
OH91 26	BAUGHMAN CREEK	03-022	8800	8400	MB	9.8	0.0	WWH	
OH74 1	MAUMEE RIVER (TONTOGANY CREEK TO WATERVILLE)	04-001	8800	8600	MB	3.3	0.0	WWH	
OH74 3	MAUMEE RIVER (BEAVER CREEK TO TONTOGANY CREEK	04-001	8800	8600	MB	7.10	0.0	WWH	
OH75 9	SWAN CREEK (AI CREEK TO BLUE CREEK)	04-003	8800	8600	MC	8.4	0.0	WWH	
OH75 4	WOLF CREEK	04-004	8800	7800	EC	7.0	0.0	WWH	
OH75 5	CAIRL CREEK (FORMERLY DRY CREEK)	04-005	8800	7800	E	0.5	0.0	WWH	
OH74 2	TONTOGANY CREEK	04-013	8800	7800	EC	4.0	0.0	WWH	
OH74 8	BRUSH CREEK	04-018	8800	8100	EC	12.0	0.0	WWH	
OH70 1.1	TRIB. TO AUGLAIZE R. (RM 19.2)	04-078	8800	8500	MC	0.5	0.0	WWH	
OH73 16.4	TRIB. TO NORTH TURKEYFOOT CR. (RM 19.5)	04-084	8800	8600	MC	0.5	0.0	WWH	
OH75 4.1	DRENNAN DITCH	04-087	8800	7800	EC	0.5	0.0	WWH	
OH75 16.1	HILL DITCH	04-089	8800	7800	EC	0.5	0.0	WWH	
OH75 18.1	TRIB. TO TENMILE CREEK (RM 16.9)	04-091	8800	8600	MC	0.5	0.0	WWH	
OH70 17	AUGLAIZE RIVER (PUSHETA CREEK TO TWOMILE CREE	04-100	8800	8000	EC	11.3	0.0	WWH	
OH70 20	AUGLAIZE RIVER (BLACKHOOF CREEK TO PUSHETA CR	04-100	8800	8000	EC	9.5	0.0	WWH	
OH71 16	FLATROCK CREEK (OH./IND. BORDER TO WILDCAT CR	04-109	8800	7900	EC	0.5	0.0	WWH	
OH71 4	NORTH POWELL CREEK	04-112	8800	8400	MB	0.5	0.0	WWH	
OH71 17	WILDCAT CREEK	04-115	8800	7900	EC	0.5	0.0	WWH	
OH71 20.2	ZIELKE DITCH	04-158	8800	8400	MB	1.10	0.0	WWH	
OH66 13	BLANCHARD RIVER (POTATO RUN TO THE OUTLET)	04-160	9002	8909	MB	12.60	0.00	WWH	
OH67 10	RILEY CREEK (LITTLE RILEY CREEK TO BLANCHARD	04-168	8800	8300	EC	0.5	0.0	WWH	
OH67 12	RILEY CREEK (HEADWATERS TO LITTLE RILEY CREEK	04-168	8800	8300	EC	0.5	0.0	WWH	
OH67 11	CRANBERRY RUN	04-169	8800	8300	EC	0.5	0.0	WWH	
OH66 2	TIDERISHI CREEK	04-184	8800	8300	EB	9.5	0.0	WWH	
OH66 6	BUCK RUN	04-186	8800	8400	EC	0.5	0.0	WWH	
OH66 22	THE OUTLET (UPSTREAM)	04-198	8800	8400	EC	0.5	0.0	WWH	
OH68 16	LITTLE OTTAWA RIVER	04-213	8800	8300	EC	6.4	0.0	WWH	
OH69 20.2	TRIB. TO LITTLE AUGLAIZE RIVER (RM 31.7)	04-227	8800	8700	MC	0.5	0.0	WWH	
OH68 11.1	MCBRIDE DITCH	04-228	8800	7900	EC	0.5	0.0	WWH	
OH68 2.1	TRIB. TO PLUM CREEK (RM 7.3)	04-229	8800	7900	EC	0.5	0.0	WWH	
OH70 18	PUSHETA CREEK	04-235	8800	8000	EC	13.7	0.0	WWH	
OH70 24	HUFFMAN CREEK	04-240	8800	8700	MB	1.4	0.0	WWH	
OH68 4.3	TRIB. TO SUGAR CREEK (21.9)	04-244	8800	7900	EC	0.5	0.0	WWH	
OH66 3.1	AURAND RUN	04-247	8800	8300	EC	0.5	0.0	WWH	
OH65 37	ST. JOSEPH RIVER (HEADWATERS TO NETTLE CREEK)	04-400	8800	7800	EC	0.5	0.0	WWH	
OH64 7	ST. MARYS RIVER (TWELVEMILE CREEK TO BLACK CR	04-500	8800	8600	EC	0.5	0.0	WWH	
OH72 19	OWL CREEK	04-615	8800	8300	EB	0.50	0.0	WWH	
OH72 21	BEAVER CREEK	04-617	8800	8300	EB	0.5	0.0	WWH	

Appendix C. (continued).

WBID	Waterbody Description	River Code	Assess-ment Date	Sampling Date	Data Type	Aquatic Life Use Miles Meeting	Aquatic Life Use Miles Threatened	Aquatic Life Use	TH[1]
OH72 33	DEER CREEK	04-628	8800	7900	EC	0.5	0.0	WWH	
OH72 35	SPRING CREEK	04-630	8800	7900	EC	0.5	0.0	WWH	
OH72 11.6	TRIB. TO PRAIRIE CREEK (RM 11.3)	04-634	8800	7900	EC	0.5	0.0	WWH	
OH72 33.1	TRIB. TO DEER CREEK (RM 5.9)	04-635	8800	7900	EC	0.5	0.0	WWH	
OH72 11.8	WILLIAMS COUNTY DITCH # 40	04-636	8800	8400	EC	0.50	0.0	WWH	
OH82 14	INDIAN CREEK	05-004	8800	8100	EC	7.5	0.0	WWH	
OH81 5	WILLOW CREEK	05-013	8800	8200	EC	5.0	0.0	WWH	
OH81 6	ROCK CREEK	05-014	8800	8200	EC	19.6	0.0	WWH	
OH82 2	GREEN CREEK	05-100	8800	8300	EC	19.8	0.0	CWH	
OH81 11	HONEY CREEK (SILVER CREEK TO SANDUSKY RIVER)	05-200	8800	8400	MB	14.5	0.0	WWH	
OH81 22	BROKENKNIFE CREEK	05-209	8800	8600	MC	7.5	0.0	WWH	
OH 8 89	NARROWS RUN	06-022	8800	8300	EC	0.5	0.0	WWH	
OH 7 46	LITTLE CAPTINA CREEK	06-046	8800	8300	EC	0.5	0.0	WWH	
OH 7 47	PIPE CREEK	06-047	8800	8300	EB	7.2	0.0	LRW	
OH 5 27	NORTH FORK WILLS CREEK	06-069	8800	8300	EC	0.00	5.5	CWH	*
OH 5 29	ISLAND CREEK	06-070	8800	8300	EC	9.9	0.0	CWH	
OH 5 24.2	TRIB. TO WILLS CREEK	06-083	8800	8300	EB	1.2	0.0	WWH	
OH 5 29.1	MELLWOOD ACRES. TRIB.	06-084	8800	8300	EC	0.5	0.0	CWH	
OH 5 24.1	WINTERSVILLE C TRIB.	06-085	8800	8300	EC	0.5	0.0	WWH	
OH 7 28	CAPTINA CREEK (N/S FORKS TO BEND FORK)	06-100	8800	8300	EB	7.4	0.0	EWH	
OH 7 20	MOORE RUN	06-102	8800	8300	EC	4.0	0.0	WWH	
OH 7 21	PEAVINE CREEK	06-103	8800	8300	EC	6.6	0.0	WWH	
OH 7 22	ROCKY FORK	06-104	8800	8300	EC	3.9	0.0	WWH	
OH 7 23	ANDERSON RUN	06-105	8800	8300	EC	4.6	0.0	WWH	
OH 7 26	JOY FORK	06-108	8800	8300	EC	5.0	0.0	WWH	
OH 7 27	PACKSADDLE RUN	06-109	8800	8300	EC	3.5	0.0	WWH	
OH 7 29	CRABAPPLE CREEK	06-110	8800	8300	EC	2.2	0.0	WWH	
OH 7 31	LONG RUN	06-112	8800	8300	EC	3.0	0.0	WWH	
OH 7 35	MIKES RUN	06-116	8800	8300	EC	3.7	0.0	WWH	
OH 7 39	SOUTH FORK CAPTINA CREEK	06-117	8800	8300	EC	14.0	0.0	WWH	
OH 7 43	MILLERS RUN	06-121	8800	8300	EC	3.5	0.0	WWH	
OH 7 37	JAKES RUN	06-124	8800	8300	EC	0.5	0.0	WWH	
OH 7 38	LONG RUN	06-125	8800	8300	EC	6.0	0.0	WWH	
OH 5 20	NORTH BRANCH CROSS CREEK	06-208	8800	8300	EB	6.4	0.0	WWH	
OH 9 32	WEST FORK DUCK CREEK (HEADWATERS TO SALT RUN)	06-340	8800	8700	MB	0.00	12.8	LWH	*
OH 8 1	LITTLE MUSKINGUM R. (FIFTEENMILE C TO OHIO R)	06-400	8800	8100	EC	14.8	0.0	WWH	
OH 8 15	LITTLE MUSKINGUM R. (CLEAR FK TO FIFTEENMILE)	06-400	8800	8300	EB	19.7	0.0	WWH	
OH 8 53	LITTLE MUSKINGUM R. (RICH FORK TO WITTEN FK)	06-400	8800	8100	EC	22.6	0.0	WWH	
OH 8 11	FIFTEEN MILE CREEK	06-410	8800	8100	EC	9.1	0.0	WWH	
OH 8 18	ARCHERS FORK	06-420	8800	8300	EB	9.9	0.0	WWH	
OH 8 38	STRAIGHT FORK	06-428	8800	8100	EC	9.8	0.0	WWH	
OH 8 29	CLEAR FORK	06-430	8800	8100	EC	23.7	0.0	WWH	
OH 8 30	WITTEN RUN	06-431	8800	8400	MB	5.0	0.0	WWH	
OH 8 44	WITTEN FORK	06-440	8800	8400	MB	11.2	0.0	WWH	
OH 8 48	DISMAL CREEK	06-444	8800	8100	EC	7.1	0.0	WWH	
OH 8 59	TOWN FORK	06-450	8800	8100	EC	6.7	0.0	WWH	
OH 8 58	RICH FORK	06-451	8800	8100	EC	6.5	0.0	WWH	
OH 6 3	TROUGH RUN	06-502	8800	8300	EC	3.2	0.0	WWH	
OH 6 11	WILLIAMS CREEK	06-504	8800	8300	EB	0.00	8.0	WWH	*
OH 6 57	SHORT CREEK (NORTH FORK TO PINEY FORK)	06-600	8800	8000	EC	0.5	0.0	LWH	
OH 7 6	PINEY FORK	06-704	8800	8300	EB	6.8	0.0	LWH	
OH 7 10	BAKER FORK	06-708	8800	8300	EB	6.7	0.0	WWH	
OH 6 24	WHEELING CREEK (COX RUN TO OHIO RIVER)	06-800	8800	8300	EC	0.5	0.0	LWH	

Appendix C. (continued).

WBID	Waterbody Description	River Code	Assess-ment Date	Sampling Date	Data Type	Aquatic Life Use Miles Meeting	Aquatic Life Use Miles Threatened	Aquatic Life Use	TH[1]
OH 6 29	STEEP RUN	06-805	8800	7900	EC	0.5	0.0	WWH	
OH 5 51	BRUSH CREEK	06-905	8800	8300	EC	0.5	0.0	WWH	
OH 5 46	SALISBURY RUN	06-913	8800	8300	EB	2.5	0.0	LRW	
OH 5 48	NANCY RUN	06-915	8800	8300	EB	5.3	0.0	CWH	
OH 5 66	UPPER NORTH FORK	06-926	8800	8300	EC	8.4	0.0	WWH	
OH 5 71	ELKHORN CREEK	06-931	8800	8300	EB	8.9	0.0	CWH	
OH 5 72	STRAWCAMP RUN	06-932	8800	8300	EB	4.8	0.0	CWH	
OH 5 73	CENTER FORK	06-933	8800	8300	EB	5.0	0.0	CWH	
OH 5 74	TRAIL RUN	06-934	8800	8300	EB	1.9	0.0	CWH	
OH93 10	WEST BRANCH ASHTABULA RIVER	07-004	8800	8400	MB	1.9	0.0	WWH	
OH 4 1	LITTLE BEAVER CREEK (NORTH FORK TO PA.)	08-001	8800	8500	MB	7.8	0.0	EWH	
OH 4 14	LITTLE BEAVER CREEK (MIDDLE FK TO NORTH FK)	08-001	8800	8700	MB	8.0	0.0	EWH	
OH 4 6	BULL CREEK	08-103	8800	8500	MB	14.5	0.0	WWH	
OH 4 11.2	EAST FORK STATELINE CREEK	08-118	8800	8500	MB	3.0	0.0	WWH	
OH 4 8.1	TRIB. TO LITTLE BULL CREEK	08-120	8800	8500	MB	2.0	0.0	WWH	
OH 4 17	MIDDLE FORK (MIDDLE RUN TO WEST FORK)	08-200	8800	8500	MB	0.00	8.6	EWH	*
OH 4 18	TURKEYFOOT RUN	08-201	8800	8400	EC	3.5	0.0	WWH	
OH 4 23	STONE MILL RUN	08-205	8800	8500	MB	0.00	4.5	WWH	*
OH 4 24.1	BUTTERMILK CREEK	08-208	8800	8500	MC	0.5	0.0	WWH	
OH 4 27	WEST FORK (BIG CREEK TO MIDDLE FORK)	08-300	8800	8500	MB	0.00	6.0	EWH	*
OH 4 34	WEST FORK (HEADWATERS TO BIG CREEK)	08-300	8800	8500	MB	0.00	16.0	EWH	*
OH31 2	INDIAN GUYAN CREEK (L. INDIAN GUYAN CR. TO OH	09-100	8800	7800	EC	7.3	0.0	WWH	
OH29 28	LEADING CREEK (LITTLE LEADING CR. TO OHIO R.)	09-200	8800	8000	EC	0.00	0.50	WWH	*
OH29 34	LITTLE LEADING CREEK	09-201	8800	8000	EC	10.6	0.0	WWH	
OH29 31	BAILEY RUN	09-212	8800	7900	EC	2.3	0.0	WWH	
OH33 49	PINE CREEK (LITTLE PINE CREEK TO OHIO RIVER)	09-400	8800	7800	EC	0.5	0.0	WWH	
OH31 51	LITTLE INDIAN CREEK	09-540	8800	8600	MC	0.5	0.0	WWH	
OH32 1	SYMMES CREEK (VENISONHAM CREEK TO OHIO RIVER)	09-700	8800	7800	EC	0.5	0.0	WWH	
OH32 25	COULLEY FORK	09-720	8800	8400	MB	3.9	0.0	WWH	
OH49 4	TENMILE CREEK	10-003	8800	7800	EC	6.0	0.0	WWH	
OH49 31	BULLSKIN CREEK	10-027	8800	7800	EC	13.1	0.0	WWH	
OH47 92	UPPER TWIN CREEK	10-085	8800	8700	EC	8.8	0.0	WWH	
OH48 31	OHIO BRUSH CREEK (BAKER FORK TO WEST FORK)	10-200	8800	8700	MB	12.5	0.0	EWH-P	
OH48 14	TREBER RUN	10-212	8800	8000	EB	4.2	0.0	EWH	
OH48 15	CAVE RUN	10-213	8800	8000	EB	3.0	0.0	EWH	
OH48 33	LITTLE EAST FORK	10-216	8800	8700	MB	4.8	0.0	WWH	
OH48 26	WEST FORK OHIO BRUSH CR. (HEADWATERS TO BUCK	10-220	8800	8700	MB	21.5	0.0	EWH	
OH48 19	SPOON RIVER	10-221	8800	8400	EC	3.1	0.0	EWH	
OH49 60	EAST FORK WHITEOAK CREEK	10-420	8800	8700	MB	20.8	0.0	EWH	
OH54 12	O'BANNON CREEK	11-010	8800	8300	EB	0.00	0.50	WWH	*
OH54 24	TURTLE CREEK	11-021	9002	8909	MB	0.00	1.00	WWH	*
OH50 3	MILL RUN	11-031	8800	8300	EB	1.0	0.0	EWH	
OH50 11	LUDLOW CREEK	11-037	8800	8300	EC	0.5	0.0	WWH	
OH53 16	E. FK. LITTLE MIAMI (EAST FK LAKE TO STONELIC	11-100	8800	8200	EB	1.7	0.0	EWH	
OH53 5	SUGARCAMP RUN	11-104	8800	8200	EC	0.5	0.0	WWH	
OH53 6	SHAYLER RUN	11-105	8800	8200	EC	0.5	0.0	WWH	
OH53 42	FIVEMILE CREEK	11-138	8800	8200	EB	0.50	0.0	WWH	
OH53 48	GLADY RUN	11-143	8800	8100	EC	0.5	0.0	WWH	
OH53 60.1	TRIB. TO E. FK. L. MIAMI RIVER (RM 75.5)	11-155	8800	7900	EC	0.5	0.0	WWH	
OH53 60.2	TRIB. TO E. FK. L. MIAMI RIVER (RM 78.4)	11-156	8800	7900	EC	0.5	0.0	WWH	
OH53 60.3	TRIB. TO E. FK. L. MIAMI RIVER (RM 82.3)	11-157	8800	7900	EC	0.5	0.0	WWH	
OH53 60.4	TRIB. TO E. FK. L. MIAMI RIVER (RM 83.9)	11-158	8800	7900	EC	0.5	0.0	WWH	
OH53 1.1	TRIB. TO E. FK. L. MIAMI RIVER (RM 4.8)	11-159	8800	7900	EC	0.5	0.0	WWH	

Appendix C. (continued).

WBID	Waterbody Description	River Code	Assess-ment Date	Sampling Date	Data Type	Aquatic Life Use Miles Meeting	Aquatic Life Use Miles Threatened	Aquatic Life Use	TH[1]
OH52 1	FIRST CREEK	11-201	8800	7900	EC	0.5	0.0	WWH	
OH52 5	LICK RUN	11-204	8800	7900	EC	0.5	0.0	EWH	
OH52 11	COWAN CREEK	11-209	8800	8300	EC	0.5	0.0	WWH	
OH52 15	LITTLE CREEK	11-213	8800	8300	EC	0.5	0.0	WWH	
OH52 8.1	EAST FORK TODD FORK	11-217	8800	8300	EC	0.5	0.0	WWH	
OH51 1	CAESAR CREEK (CAESAR CREEK LAKE TO LITTLE MIA	11-300	8800	8300	EB	13.9	0.0	WWH	
OH51 13	CAESAR CREEK (S. BR. CAESAR CR. TO CAESAR CR	11-300	8800	8300	EC	0.5	0.0	WWH	
OH51 5	TURKEY RUN	11-304	8800	8300	EC	0.5	0.0	WWH	
OH51 6	BUCK RUN	11-305	8800	8300	EC	0.5	0.0	WWH	
OH51 7	ANDERSON FORK (GROG RUN TO CAESAR CREEK LAKE)	11-306	8800	8400	MB	11.0	0.0	EWH	
OH51 2.2	HARLANS RUN	11-313	8800	8300	EC	0.5	0.0	WWH	
OH51 2.1	GUM RUN	11-314	8800	8200	EC	0.5	0.0	WWH	
OH50 13	OLDTOWN CREEK	11-401	8800	8300	EB	0.50	0.0	WWH	
OH85 23	CRANBERRY CREEK	12-006	8800	8400	EC	3.0	0.0	WWH	
OH85 22	CHAPPEL CREEK	12-007	8800	8400	EC	22.0	0.0	WWH	
OH85 21	SUGAR CREEK	12-008	8800	8400	EC	9.0	0.0	WWH	
OH85 20	DARBY CREEK	12-009	8800	8400	EC	6.0	0.0	WWH	
OH85 19	SHEROD CREEK	12-010	8800	8400	EC	0.8	0.0	WWH	
OH85 18.2	TRIB. TO LAKE ERIE (BEULAH BEACH)	12-012	8800	8400	EC	2.0	0.0	WWH	
OH85 18.3	TRIB. TO LAKE ERIE (HEIDELBURG BEACH)	12-013	8800	8400	EC	2.0	0.0	WWH	
OH84 8	WEST BRANCH HURON R. (SLATE RUN TO EAST BRANC	12-200	8800	8400	MB	2.50	0.0	WWH	
OH87 8	EAST BRANCH ROCKY RIVER (HEADWATERS TO HEALEY	13-100	8800	8100	EB	17.0	0.0	WWH	
OH87 8.1	TRIB. TO E. BR. ROCKY R. (MEDINA #9)	13-105	8800	8300	EC	0.5	0.0	WWH	
OH87 8.2	TRIB. TO E. BR. ROCKY RIVER (RM 29.1)	13-107	8800	8300	EC	0.5	0.0	WWH	
OH87 5.1	TRIB. TO BALDWIN CREEK (RM 6.0)	13-108	8800	8200	EC	0.5	0.0	WWH	
OH87 19	NORTH BRANCH ROCKY RIVER	13-205	8800	8100	EB	5.8	0.0	WWH	
OH87 15.1	CHAMPIAN CREEK	13-212	8800	8300	EC	0.5	0.0	WWH	
OH87 10.11	TRIB. TO TRIB. TO W. BR. ROCKY R. (RM 1.78)	13-216	8800	8200	EC	0.5	0.0	WWH	
OH87 10.1	TRIB. TO W. BR. ROCKY R. (RM 1.78)	13-217	8800	8200	EC	0.5	0.0	WWH	
OH55 34	GREAT MIAMI RIVER (INDIAN LAKE TO MUCHINIPPI	14-001	9002	8809	MB	5.00	0.00	WWH	
OH62 12	TAYLOR CREEK	14-004	8800	8200	EC	0.5	0.0	WWH	
OH62 14	PADDY'S RUN	14-005	8800	8000	EC	0.5	0.0	WWH	
OH62 16	OWL CREEK	14-007	8800	8600	MC	2.3	0.0	WWH	
OH60 4	BANKLICK CREEK	14-012	8800	8600	MC	0.5	0.0	WWH	
OH60 5	PLEASANT RUN	14-013	8800	8000	EC	0.5	0.0	WWH	
OH60 7	TWO MILE CREEK	14-015	8800	8200	EC	0.5	0.0	WWH	
OH60 12	GREGORY CREEK(HDWTRS TO GREAT MIAMI R.)	14-016	8800	8200	EC	0.5	0.0	WWH	
OH60 19	ELK CREEK	14-022	8800	8700	MB	12.60	0.0	EWH	
OH60 34	OPOSSUM CREEK	14-035	8800	8000	EC	0.5	0.0	WWH	
OH60 35	HOLES CREEK	14-036	8800	8000	EC	0.5	0.0	WWH	
OH56 6	WEST FORK HONEY CREEK	14-046	8800	8000	EC	0.5	0.0	WWH	
OH56 37	MILL BRANCH	14-058	8800	8200	EC	0.5	0.0	WWH	
OH56 38	BRUSH CREEK	14-059	8800	8200	EC	0.5	0.0	WWH	
[illegible]	OWL CREEK	[illegible]	[illegible]	[illegible]	MC	[illegible]	[illegible]	[illegible]	
OH60 2.1	TRIB. TO INDIAN CREEK (QUEEN ACRES)	14-090	8800	8500	MC	2.0	0.0	WWH	
OH55 34.1	TRIB. TO GREAT MIAMI R. (RM 157.3)	14-092	8800	8000	EC	0.5	0.0	WWH	
OH56 10.2	PETERS CREEK	14-096	9002	8607	MB	2.00	0.00	WWH	
OH56 10.1	TRIB. TO GREAT MIAMI RIVER (103.9)	14-097	8800	8200	EC	0.5	0.0	WWH	
OH58 21	MAD RIVER (CHAPMAN CREEK TO BUCK CREEK)	14-100	8800	8400	MB	0.00	6.5	CWH	*
OH58 29	MAD RIVER (NETTLE CREEK TO CHAPMAN CREEK)	14-100	8800	8400	MB	0.00	4.6	CWH	*
OH58 43	MAD RIVER (KINGS CREEK TO NETTLE CREEK)	14-100	8800	8600	MB	0.00	6.6	CWH	*
OH58 20	BUCK CREEK (HEADWATERS TO EAST FORK BUCK CREE	14-110	8800	8400	EC	0.5	0.0	CWH	

Appendix C. (continued).

WBID	Waterbody Description	River Code	Assess-ment Date	Sampling Date	Data Type	Aquatic Life Use Miles Meeting	Aquatic Life Use Miles Threatened	Aquatic Life Use	TH[1]
OH58 19	EAST FORK BUCK CREEK	14-113	8800	8400	EC	0.5	0.0	CWH	
OH58 44	DUGAN RUN	14-128	8800	8400	EC	0.5	0.0	WWH	
OH58 45	MEADOW CREEK	14-129	8800	8400	EC	[illegible]	0.0	WWH	
OH58 49	GRADY CREEK	14-137	8800	8600	MB	[illegible]	[illegible]	CWH	
OH58 50	MACOCHEE CREEK	14-138	8800	8400	EC	3.5	0.0	CWH	
OH58 52	MACOCHEE CREEK	14-139	8800	8600	MB	0.00	8.2	CWH	*
OH58 48.1	WEST LIBERTY WWTP TRIB.	14-144	8800	8400	MB	3.0	0.0	WWH	
OH58 20.1	DUGAN DITCH	14-145	8800	8400	EC	0.5	0.0	WWH	
OH57 4	BRUSH CREEK	14-203	8800	8200	EB	0.70	0.0	EWH	
OH57 35	DISMAL CREEK	14-232	8800	8200	EB	0.70	0.0	WWH	
OH59 1	TWIN CREEK (LITTLE TWIN CREEK TO GREAT MIAMI)	14-500	9002	8809	MB	6.70	0.00	EWH	
OH56 20	LORAMIE CREEK (TURTLE CREEK TO GREAT MIAMI R)	14-600	8800	8200	EC	0.5	0.0	WWH	
OH56 27	NINEMILE CREEK	14-606	8800	8600	MB	0.5	0.0	WWH	
OH55 37	NEW RICHLAND TRIBUTARY	14-806	8800	8200	EC	0.5	0.0	WWH	
OH90 6	EAST BRANCH CHAGRIN RIVER	15-002	8800	8600	MB	18.2	0.0	CWH	
OH90 10	AURORA BRANCH	15-005	8800	8600	MB	0.00	16.1	WWH	*
OH90 7.1	CAVES CREEK	15-011	8800	8600	MB	0.5	0.0	WWH	
OH78 9	PORTAGE RIVER (NORTH BRANCH TO SUGAR CREEK)	16-001	8800	8500	MB	17.7	0.0	WWH	
OH77 10	NORTH BRANCH PORTAGE RIVER	16-007	8800	8400	EC	0.50	0.0	WWH	
OH77 9	SOUTH BRANCH (HEADWATERS TO E. BR. PORTAGE R)	16-100	9001	8810	MB	1.10	0.00	WWH	
OH77 4.1	KOA TRIB.	16-106	8800	8500	MB	2.0	0.0	WWH	
OH76 18	CEDAR CREEK	16-202	8800	8600	MB	22.0	0.0	WWH	
OH76 4	TOUSSAINT CREEK	16-215	8800	8600	MB	11.8	0.0	WWH	
OH23 15	MUSKINGUM RIVER (LICKING RIVER TO SALT CREEK)	17-001	9002	8810	MB	9.20	0.00	WWH	
OH12 1	CONOTTON CREEK	17-100	8800	8600	MC	0.50	0.0	WWH	
OH12 19	CONOTTON CREEK	17-100	8800	8600	MC	8.6	0.0	WWH	
OH12 16	MCGUIRE CREEK	17-106	8800	8600	MC	0.5	0.0	WWH	
OH12 5	INDIAN FORK	17-110	8800	8600	MC	0.5	0.0	WWH	
OH12 10	COLD SPRING RUN	17-115	8800	7900	EC	3.4	0.0	WWH	
OH12 12	GANT CREEK	17-117	8800	7900	EC	0.5	0.0	WWH	
OH19 4	DOUGHTY CREEK	17-153	8800	8300	EB	20.1	0.0	WWH	
OH19 9	BIG RUN	17-157	8800	7900	EC	0.5	0.0	WWH	
OH19 12	WOLF CREEK	17-160	8800	7900	EC	0.5	0.0	WWH	
OH19 15	SHRIMPLIN RUN	17-162	8800	7900	EC	0.5	0.0	WWH	
OH19 16	HARDY RUN	17-163	8800	7900	EC	0.5	0.0	WWH	
OH19 26	MARTINS CREEK	17-172	8800	7900	EC	0.5	0.0	WWH	
OH19 27	PAINT CREEK	17-173	8800	7900	EC	0.5	0.0	WWH	
OH19 29	SALT CREEK	17-175	8800	7900	EC	0.5	0.0	WWH	
OH19 40	LITTLE KILLBUCK CREEK	17-184	8800	8300	EB	9.0	0.0	WWH	
OH19 31.2	UNNAMED TRIBUTARY @RM 44.58	17-194	8800	8500	MB	0.5	0.0	WWH	
OH19 31.3	JENNINGS DITCH	17-196	8800	8500	MC	0.5	0.0	WWH	
OH19 44.1	KILLBUCK DITCH	17-199	8800	8600	MC	0.5	0.0	LRW	
OH22 1	LICKING RIVER (DILLON RES. TO MUSKINGUM RIVER	17-200	9002	8909	MB	3.60	0.00	WWH	
OH22 9	BRUSHY FORK	17-207	8800	8200	EC	6.3	0.0	WWH	
OH22 10	ROCKY FORK	17-210	8800	8600	MB	20.2	0.0	EWH	
OH22 11	LOST RUN	17-211	8800	8600	MB	10.2	0.0	WWH	
OH22 14	PAINTER RUN	17-214	8800	8600	MB	5.7	0.0	WWH	
OH22 15	LONG RUN	17-215	8800	8600	MB	5.3	0.0	WWH	
OH22 49	MOOTS RUN	17-224	8800	7900	EC	3.6	0.0	WWH	
OH22 50	SIMPSON RUN	17-225	8800	7900	EC	1.5	0.0	WWH	
OH22 51	PET RUN	17-226	8800	7900	EC	3.6	0.0	WWH	
OH22 52	KIBER RUN	17-227	8800	8700	MB	2.1	0.0	WWH	
OH22 57	RAMP CREEK	17-232	8800	8400	EC	0.5	0.0	WWH	

Appendix C. (continued).

WBID	Waterbody Description	River Code	Assess-ment Date	Sampling Date	Data Type	Aquatic Life Use Miles Meeting	Aquatic Life Use Miles Threatened	Aquatic Life Use	TH[1]
OH22 60	BELL RUN	17-234	8800	7900	EC	0.5	0.0	WWH	
OH22 46.1	TRIB. TO RACCOON CREEK (RM 18.9)	17-240	9002	8908	MB	0.50	0.00	WWH	
OH22 25	DRY RUN	17-252	8800	7900	EC	7.3	0.0	WWH	
OH22 30	CLEAR FORK	17-257	8800	7900	EC	0.0	9.4	WWH	*
OH22 32	DOG HOLLOW RUN	17-259	8800	7900	EC	2.0	0.0	WWH	
OH22 33	LAKE FORK	17-260	8800	8400	MB	0.00	12.2	WWH	*
OH22 41	OTTER FORK	17-267	9002	8908	MB	0.00	0.50	WWH	*
OH23 25	KENT RUN	17-313	8800	8600	MB	0.00	12.1	WWH	*
OH14 28	STILLWATER CREEK (BOGGS FORK TO BRUSHY FORK)	17-350	8800	8600	MC	0.5	0.0	LWH	
OH14 20	BRUSHY FORK	17-380	8800	8600	MC	0.5	0.0	WWH	
OH13 17	MIDDLE FORK SUGAR CREEK	17-406	8800	8700	MB	2.3	0.0	WWH	
OH11 13	INDIAN RUN	17-454	8800	8500	MC	0.5	0.0	WWH	
OH11 10.1	SWARTZ DITCH	17-484	8800	8500	MB	2.6	0.0	WWH	
OH15 10	TUSCARAWAS RIVER (DUNLOP CREEK TO EVANS CR.)	17-500	9002	8810	MB	10.50	0.00	EWH-P	
OH15 18	BROWNING RUN	17-516	8800	7900	EC	0.5	0.0	WWH	
OH15 27	BEAVERDAM CREEK (HEADWATERS TO TUSCARAWAS R.)	17-523	8800	8300	EC	0.5	0.0	WWH	
OH10 2	WOLF CREEK	17-530	8800	8300	EC	0.5	0.0	WWH	
OH10 27	PANCAKE CREEK	17-539	8800	8200	EC	0.5	0.0	WWH	
OH10 32	SHOCALOG RUN	17-544	8800	7900	EC	0.5	0.0	WWH	
OH10 33.3	MUD RUN	17-546	8800	8300	EC	0.5	0.0	WWH	
OH10 33.4	TRIB. TO TUSCARAWAS RIVER (UNIONTOWN)	17-547	8800	7800	EC	0.5	0.0	WWH	
OH10 26.1	TRIB. TO TUSCARAWAS RIVER (RM 108.9)	17-549	8800	8300	EC	0.5	0.0	WWH	
OH10 13.5	TRIB. TO SILVER CREEK (MEADOWS SUBDIV.)	17-563	8800	8300	EC	0.5	0.0	WWH	
OH10 1.2	TRIB. TO TUSCARAWAS RIVER (RM 82.0)	17-564	8800	8600	MC	0.5	0.0	WWH	
OH10 21.1	TRIB. TO CHIPPEWA CREEK (RM 14.5)	17-565	8800	8300	EC	0.5	0.0	WWH	
OH10 13.3	STEELE DITCH	17-566	8800	8300	EC	0.5	0.0	WWH	
OH10 5.2	TRIB. TO TUSCARAWAS RIVER (RM 89.9)	17-567	8800	8300	EC	0.5	0.0	WWH	
OH10 1.1	SHERMAN RUN	17-568	8800	8300	EC	0.5	0.0	WWH	
OH15 23.1	TRIB. TO MUD RUN	17-569	8800	7900	EC	0.5	0.0	WWH	
OH10 19.1	TRIB. TO LITTLE CHIPPEWA CREEK (RM 10.5)	17-570	8800	8100	EC	0.5	0.0	WWH	
OH10 13.4	TRIB. TO SILVER CREEK (RM 4.1)	17-571	8800	8100	EC	0.5	0.0	WWH	
OH10 5.1	WEST SIPPO CREEK	17-575	8800	8300	EC	0.5	0.0	WWH	
OH20 24	WALHONDING RIVER (KILLBUCK CR. TO TUSCARAWAS)	17-600	9002	8810	MB	7.30	0.00	EWH-P	
OH20 31	WALHONDING R. (MOHICAN/KOKOSING TO KILLBUCK)	17-600	9002	8810	MB	23.20	0.00	EWH-P	
OH18 6	LITTLE JELLOWAY CREEK	17-655	8800	8700	MB	2.5	0.0	EWH-P	
OH17 4	MOHICAN RIVER (ROCKY FORK TO UNNAMED TRIB.)	17-700	8800	8700	MB	11.5	0.0	WWH	
OH17 10	MUDDY FORK MOHICAN RIVER	17-714	8800	8400	MB	5.7	0.0	WWH	
OH17 16	OLDTOWN RUN	17-720	8800	8400	EC	0.5	0.0	WWH	
OH17 18	SCOTT RUN	17-722	8800	8400	EC	0.5	0.0	WWH	
OH17 19	NEWELL RUN	17-723	8800	8400	EC	0.5	0.0	WWH	
OH17 20	KAKOTAWA CREEK	17-724	8800	8400	EC	0.5	0.0	WWH	
OH16 29	LEATHERWOOD CREEK	17-740	8800	8400	EC	0.5	0.0	WWH	
OH16 31	MARSH RUN	17-742	8800	8400	EC	0.5	0.0	WWH	
OH16 19.5	TRIB. TO ROCKY FORK (RM 11.4)	17-744	8800	8000	EC	0.5	0.0	WWH	
OH16 19.3	TRIB. TO ROCKY FORK (RM 7.7)	17-745	8800	7900	EC	0.5	0.0	WWH	
OH16 19.8	TRIB. TO ROCKY FORK (RM 16.4)	17-746	8800	7900	EC	0.5	0.0	WWH	
OH16 28.4	TRIB. TO BLACK FORK (RM 57.1)	17-747	8800	7900	EC	0.5	0.0	WWH	
OH16 28.3	TRIB. TO BLACK FORK (RM 54.4)	17-748	8800	7900	EC	0.5	0.0	WWH	
OH16 14	STEEL RUN	17-762	8800	8000	EC	0.5	0.0	WWH	
OH16 28.5	TRIB. TO BLACK FORK (RM 58.8)	17-763	8800	7900	EC	0.5	0.0	WWH	
OH16 28.2	TRIB. TO BLACK FORK (RM 45.9)	17-764	8800	8400	EC	0.5	0.0	WWH	
OH16 19.7	TRIB. TO ROCKY FORK (RM 14.4)	17-765	8800	8000	EC	0.5	0.0	WWH	
OH16 19.6	TRIB. TO ROCKY FORK (RM 12.0)	17-766	8800	8000	EC	0.5	0.0	WWH	

Appendix C. (continued).

WBID	Waterbody Description	River Code	Assess-ment Date	Sampling Date	Data Type	Aquatic Life Use Miles Meeting	Aquatic Life Use Miles Threatened	Aquatic Life Use	TH[1]
OH16 19.4	TRIB. TO ROCKY FORK (RM 10.7)	17-767	8800	8000	EC	0.5	0.0	WWH	
OH16 19.2	TRIB. TO ROCKY FORK (RM 7.1)	17-768	8800	8000	EC	0.5	0.0	WWH	
OH21 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
OH21 55	NORTH CROOKED CREEK	17-834	8800	7800	EC	6.0	0.0	LWH	
OH21 1.1	TRIB. TO WHITE EYES CREEK (RM 2.6)	17-838	8800	7900	EC	0.5	0.0	LWH	
OH21 1.2	TRIB. TO WHITE EYES CREEK (RM 4.5)	17-839	8800	7900	EC	0.5	0.0	LWH	
OH21 61	BUFFALO FORK	17-870	8800	8700	MB	7.9	0.0	LWH	
OH21 62	CRANE RUN	17-871	8800	8700	MB	2.4	0.0	WWH-P	
OH21 70	MILLER CREEK	17-879	8800	8700	MB	4.5	0.0	LWH	
OH21 72	RANNELLS CREEK	17-881	8800	8700	MB	3.1	0.0	WWH-P	
OH21 73	BUFFALO CREEK	17-890	8800	8400	MB	14.5	0.0	LWH	
OH23 1	SALT CREEK	17-940	8800	8600	MC	0.5	0.0	WWH	
OH23 11	LITTLE SALT CREEK	17-950	8800	8600	MC	0.5	0.0	WWH	
OH20 2	WAKATOMIKA CREEK (BRUSHY FORK TO MUSKINGUM R)	17-960	8800	8400	MB	0.00	19.7	WWH	*
OH 1 30	MAHONING RIVER (HEADWATERS TO BEECH CREEK)	18-001	8800	8400	MB	10.2	0.0	WWH	
OH 2 3	HINES RUN	18-005	8800	7900	EC	0.5	0.0	WWH	
OH 2 5	YELLOW CREEK	18-007	8800	8300	EC	0.5	0.0	WWH	
OH 2 10	CRAB CREEK	18-011	8800	8300	EC	0.5	0.0	WWH	
OH 2 22	SQUAW CREEK	18-014	8800	8300	EC	0.5	0.0	WWH	
OH 2 38	DUCK CREEK	18-029	8800	8300	EC	0.5	0.0	WWH	
OH 1 10	SILVER CREEK	18-046	8800	8100	EB	0.00	7.2	CWH	*
OH 1 21	KALE CREEK	18-048	8800	7800	EC	0.5	0.0	WWH	
OH89 25	YELLOW CREEK	19-021	9002	8809	MB	0.00	4.60	WWH	*
OH89 8.1	WOOD CREEK	19-043	8800	8400	MB	2.5	0.0	LRW-P	
OH89 10.1	TRIB. TO POND BROOK	19-054	8800	8400	EC	0.5	0.0	WWH	
OH89 13.1	INDIAN CREEK	19-055	8800	8400	EC	0.5	0.0	WWH	
OH87 24.1	NO NAME CREEK	20-026	8800	7800	EC	0.5	0.0	WWH	
OH85 7	VERMILION RIVER (EAST FORK TO LAKE ERIE)	21-001	8800	8400	MB	13.9	0.0	EWH	
OH63 10	HARDIN CREEK	22-106	8800	8400	MB	0.5	0.0	WWH	
OH62 31	EAST FORK MILL CREEK	23-006	8905	8809	MB	0.00	7.10	WWH	*

[1] Date format: YYMM, month optional.

[2] Assessment type abreviations: EC - Evaluated Level Chemical Data, MC - Monitored Level Chemical Data, EB - Evaluated Level Biological Data, MB - Monitored Level Biological Data.

[3] Aquatic Life Use Abbreviations: EWH - Exceptional Warmwater Habitat, WWH - Warmwater Habitat, MWH - Modified Warmwater Habitat, CWH - Coldwater Habitat, LWH - Limited Warmwater Habitat, LRW - Limited Resource Water.

[4] An asterisk denotes a threatened segment.

Appendix D. Locations in Ohio with highly elevated and extremely elevated levels of metals in sediments.

Waterbody ID No.	River Code	River Mile	Location	Year	Highly/Extremely Elevated Metals
OH86 2	20-001	3.40	BLACK R. AT LORAIN - 0.1 MI DST U.S. STEEL 002	82	Cd,Cr,Cu,Pb,Zn,
OH86 2	20-001	1.30	BLACK R. DST 21ST ST/UPST N&W RR BRIDGE	82	Cd,Cr,Cu,Pb,Zn,
OH86 2	20-001	3.70	BLACK R. UPST U.S. STEEL 002 - DST ISLAND	82	Cd,Cr,Cu,Pb,Zn,
OH86 2	20-001	3.90	BLACK R. DST U.S. STEEL 005 OUTFALL	82	Cd,Cu,Pb,Zn,
OH86 3	20-002	0.20	FRENCH CREEK NEAR MOUTH	82	Cd,
OH 6 1	06-500	1.48	MCMAHON CREEK W OF BELLAIRE - TWP. RD. 476	87	Pb,
OH 7 50	06-049	0.50	WEGEE CREEK NEAR SHADYSIDE - CO. RD. 48	87	As,Pb,Zn,
OH89 2	19-002	0.05	KINGSBURY RUN AT CLEVELAND - FOOTBRIDGE AT MOUTH	85	Cd,Cu,Pb,Zn,
OH89 8.2	19-048	0.12	E. BR. DEERLICK RUN DST HUKILL CO. - EGBERT RD.	85	Cr,Cu,Zn,
OH89 8.2	19-048	0.79	E. BR. DEERLICK RUN JUST DST HUKILL CO.	88	Cd,Cu,Pb,Zn,
OH89 6	19-001	11.40	CUYAHOGA R. UPST. S.R. 21/RR BRIDGE	85	Cu,Zn,
OH89 27	19-001	40.40	CUYAHOGA R. UPST OLD PORTAGE TRAIL	85	Cr,
OH88 5	19-001	45.10	CUYAHOGA R. AT AKRON - OHIO ED. DAM POOL	85	As,Cd,Cr,Cu,Pb,Zn.
OH88 5	19-001	50.00	CUYAHOGA R. AT MUNROE FALLS DAM POOL	85	As,Cd,Pb,Zn,
OH89 8	19-007	3.60	TINKERS CREEK JUST DST CONFL. DEERLICK RUN	85	As,
OH89 8	19-007	3.80	TINKERS CREEK JUST UPST CONFL. DEERLICK RUN	85	As,
OH88 8	19-028	0.28	BREAKNECK CREEK NEAR MOUTH - UPST RR BRIDGE	85	Cr,
OH89 8.2	19-048	0.08	SE BRANCH DEERLICK RUN AT WALTON RD.	85	As,Cd,Pb,
OH88 1	19-030	2.14	L. CUYAHOGA R. AT AKRON - CUYAHOGA ST.	87	Pb,Zn,
OH60 2	14-010	6.80	INDIAN CREEK UPST QUEEN ACRES WWTP	85	Cr,
OH25 23	01-001	89.45	HOCKING R. UPST. LANCASTER WWTP - S. MAPLE ST.	82	Cd,Cr,Pb,Zn,
OH25 23	01-001	88.50	HOCKING R. AT 1ST BRIDGE DST LANCASTER WWTP	82	Cd,Cr,
OH25 23	01-001	84.13	HOCKING R. DST LANCASTER - HORNS MILL RD.	82	Cd,
OH25 1	01-001	81.30	HOCKING R. DST SUGAR GROVE - ADJ BUCKEYE RD.	82	Cd,
OH25 23	01-001	90.67	HOCKING R. AT LANCASTER - U.S. RT. 22	82	Cd,
OH25 27	01-048	0.36	HUNTERS RUN AT LANCASTER - U.S. RT. 22	82	Pb,
OH 4 3	08-100	5.56	N. FK. L. BEAVER CREEK AT ACHOR - TWP. RD. 1026	85	Zn,
OH 4 6	08-103	0.61	BULL CREEK AT NEGLEY - S.R. 170	85	Zn,
OH 4 34.1	08-308	0.28	CHEMLIME TRIB. UPST WILSONS POND	85	Zn,
OH 4 22	08-200	10.99	M. FK. L. BEAVER CREEK AT LISBON - U.S. RT 30	85	Cu,Pb,
OH 4 7	08-104	0.01	LESLIE RUN W OF NEGLEY - AT MOUTH	85	Pb,Zn,
OH53 36	11-100	35.26	E. FK. L. MIAMI R. JUST UPST WILLIAMSBURG WWTP	85	Cr,
OH 2 7	18-001	19.07	MAHONING R. AT YOUNGSTOWN - MAHONING AVE.	83	As,Cd,Cr,Cu,Pb,Zn,
OH64 31	04-519	2.10	CARTER CREEK W OF NEW KNOXVILLE - S.R. 219	86	Cr,
OH70 14	04-128	3.90	SIXMILE CREEK AT N EDGE OF SPENCERVILLE- S.R. 66	87	Cr,Cu,Pb,Zn,
OH70 14	04-128	3.59	SIXMILE CREEK DST SPENCERVILLE WWTP TRIB.	85	Zn,
OH70 14	04-128	3.85	SIXMILE CREEK UPST FARM SERVICES - LIGHT DUTY RD	85	Cu,
OH70 14	04-128	4.24	SIXMILE CREEK AT SPENCERVILLE - BAILEY RD	85	Pb,
OH70 14	04-128	3.94	SIXMILE CREEK DST HAYES ALBION/OHIO DEC. OUTFALL	86	Cr,Cu,Zn,
OH68 17	04-200	36.30	OTTAWA R. DST B.P. CHEMICAL CO.	86	Pb,Zn,
OH68 17	04-200	37.00	OTTAWA R. AT LIMA - UPST ADGATE RD.	86	Cr,Pb,
OH68 17	04-200	38.63	OTTAWA R. UPST LIMA WWTP - COLLETT ST.	86	Pb,
OH68 4	04-203	18.54	SUGAR CREEK DST FORD MOTOR CO. TRIB. - BOOSE RD.	85	Zn,
OH68 17	04-200	37.12	OTTAWA R. UPST B.P. REFINERY	86	Pb,
OH66 4	04-224	0.03	OIL DITCH W OF FINDLAY - TWP. RD. 89	87	Cr,Cu,Pb,Zn,
OH66 4	04-224	0.86	OIL DITCH W OF FINDLAY - CO. RD. 140	87	Cd,Cu,Pb,Zn,
OH66 4	04-224	2.70	OIL DITCH UPST CENTREX/DST TARBOX-MCCALL	83	As,Cd,Cu,Pb,Zn,
OH66 4	04-224	3.05	OIL DITCH AT FINDLAY - UPST COOPER TIRE.	85	Cd,Cu,Zn,
OH 5 43.1		0.50	DITCH TO OIL DITCH DST COOPER TIRE 001 OUTFALL	83	Cd,Cu,Pb,
OH66 4	04-224	1.79	OIL DITCH W OF FINDLAY - STANFORD AVE.	87	Cr,Pb,Zn,
OH72 11	04-633	7.96	PRAIRIE CREEK DST BRYAN - U.S. RT. 6	84	Cr,
OH72 11	04-633	9.80	PRAIRIE CREEK DST BRYAN WWTP - ADJ T.R. 183	85	Cd,Zn,
OH72 11	04-633	10.60	PRAIRIE CREEK DST BRYAN WWTP - CO. RD. 456	84	Cr,Cu,
OH72 11	04-633	5.90	PRAIRIE CREEK AT FLICKINGER RD.	84	Cr,
OH72 11	04-633	3.40	PRAIRIE CREEK AT FLICKINGER RD.	84	Cr,
OH65 38	04-418	2.75	JOHN LATTANER DITCH AT CHASE BRASS & COPPER OUTF	85	Cd,Cu,Pb,Zn,
OH74 17	04-001	1.00	MAUMEE R. AT TOLEDO - DST TOLEDO WWTP	86	Zn,
OH74 17	04-001	4.85	MAUMEE R. AT TOLEDO - CHERRY ST.	86	Pb,Zn,
OH75 1	04-001	9.40	MAUMEE R. NEAR EAGLE POINT COLONY	86	As,Zn,
OH74 16	04-001	32.60	MAUMEE R. UPST GRAND RAPIDS DAM	86	Cr,
OH75 3	04-003	1.24	SWAN CREEK AT TOLEDO - COLLINWOOD BLVD.	86	Pb,Zn,
OH75 16	04-300	6.44	OTTAWA R. AT TOLEDO - LAGRANGE ST.	86	Cr,Zn,

Appendix D. (continued).

Waterbody ID No.	River Code	River Mile	Location	Year	Highly/Extremely Elevated Metals
OH75 2	04-002	3.02	DUCK CREEK AT TOLEDO - WHEELING ST.	87	Cr,
OH16 28	17-730	49.57	BLACK FORK MOHICAN R. AT PLYMOUTH-SPRING MILL RD.	85	Cd,Zn,
OH17 14	17-718	10.50	JEROME FORK E OF ASHLAND - S.R. 250	84	Cu,Pb,Zn,
OH17 22.1	17-743	0.29	TRIB. TO JAMISON CREEK AT U.S. RT. 42	84	Cd,Cu,Pb,Zn,
OH17 22.1	17-743	1.12	TRIB. TO JAMISON CREEK DST PHILWAY - 8TH/BUCKEYE ST.	84	Cu,Pb,Zn,
OH17 14	17-718	7.90	JEROME FORK NW OF JEROMESVILLE - TWP. RD. 1600	84	Cu,Zn,
OH13 22	17-418	4.20	L. SUGAR CREEK AT S. KANSAS RD.	85	As,Cr,
OH13 20	17-400	25.00	SUGAR CREEK NE OF WEST LEBANON - S.R. 241	85	As,Cr,
OH13 1	17-400	0.10	SUGAR CREEK AT DOVER - AT MOUTH	88	As,Cd,Cu,Pb,Zn,
OH10 28	17-540	2.07	WOLF CREEK AT BARBERTON - NORTON AVE.	85	Zn,
OH10 26	17-500	106.00	TUSCARAWAS R. NE OF CLINTON - CENTER RD.	85	Cr,
OH10 28	17-540	0.19	WOLF CREEK NEAR MOUTH - AT RR	85	Cd,
OH10 33	17-500	112.50	TUSCARAWAS R. AT BARBERTON - FAIRVIEW AVE.	85	Pb,
OH11 8	17-464	0.04	W. BR. NIMISHILLEN CREEK AT CANTON - MARKET AVE.	87	Zn,
OH11 10	17-462	0.05	M. BR. NIMISHILLEN CREEK AT CANTON - COOK PARK	85	Pb,
OH11 11	17-463	0.13	E. BR. NIMISHILLEN CREEK AT CANTON - COOK PARK	85	Zn,
OH11 21	17-470	0.50	STILL FORK SANDY CREEK S OF MINERVA - ARROW RD.	85	Cr,Zn,
OH11 5	17-460	8.82	NIMISHILLEN CREEK AT N. INDUSTRY - BAUM RD.	85	Zn,
OH11 5	17-460	10.10	NIMISHILLEN CREEK UPST CANTON WWTP	85	Zn,
OH11 6	17-468	1.75	HURFORD RUN DST ASHLAND OIL 001 - AT FOOTBRIDGE	86	Cr,Pb,Zn,
OH11 8	17-464	0.06	W. BR. NIMISHILLEN CREEK AT CANTON - CLEVELAND AVE	85	Cr,Cu,Pb,Zn,
OH11 8	17-464	0.31	W. BR. NIMISHILLEN CREEK AT CANTON - 15TH ST.	87	Pb,Zn,
OH11 11	17-463	0.33	E. BR. NIMISHILLEN CREEK AT CANTON - BELDEN AVE.	85	Pb,Zn,
OH11 6	17-468	1.70	HURFORD RUN AT CANTON - DST CONFL DOMER DITCH	85	Cr,Pb,Zn,
OH11 8.1	17-479	3.10	MCDOWELL DITCH JUST DST CONFL HOOVER DITCH	85	Cr,
OH11 8.2	17-480	0.01	HOOVER DITCH AT NORTH CANTON - AT MOUTH	85	Cr,
OH12 13	17-100	20.50	CONOTTON CREEK NW OF LEESVILLE - S.R. 212	85	Cr,
OH15 31	17-500	61.52	TUSCARAWAS R. UPST DOVER - S.R. 416	86	Zn,
OH15 31	17-500	58.42	TUSCARAWAS R. JUST UPST DAM UPST DOVER WWTP	88	As,Cd,Cr,Cu,Pb,Zn,
OH15 31	17-500	60.50	TUSCARAWAS R. UPST DOVER - ISLAND NEAR GOLF COURSE	88	Cd,Pb,Zn,
OH15 31	17-500	63.76	TUSCARAWAS R. UPST DOVER - DOVER DAM	88	Cd,Pb,Zn,
OH23 48	17-001	85.00	MUSKINGUM R. UPST ELLIS DAM	86	Cr,Zn,
OH23 20	17-300	0.58	MOXAHALA CREEK AT SOUTH ZANESVILLE - CO. RD. 6	88	Cr,
OH24 92	17-001	39.65	MUSKINGUM R. AT STOCKPORT - S.R. 266	86	Cr,
OH24 92	17-001	39.45	MUSKINGUM R. AT STOCKPORT - 0.2 MI. DST DAM	86	Cr,
OH24 92	17-001	39.57	MUSKINGUM R. AT STOCKPORT - 80 YDS. DST DAM	86	Zn,
OH24 92	17-001	48.97	MUSKINGUM R. AT MCCONNELSVILLE - JUST UPST DAM	86	Cr,
OH24106	17-001	51.91	MUSKINGUM R. AT GOULD 001 OUTFALL	88	As,Cd,Cr,Cu,Pb,Zn,
OH24106	17-001	56.60	MUSKINGUM R. JUST UPST ROKEBY LOCK DAM	86	Zn,
OH23 15	17-001	67.60	MUSKINGUM R. JUST UPST PHILO DAM	86	Cr,Zn,
OH23 15	17-001	73.50	MUSKINGUM R. JUST UPST CONFL MOXAHALA CREEK	88	Pb,
OH24 61	17-070	2.10	OLIVE GREEN CREEK NW OF BEVERLY - S.R. 76.	87	Cr,
OH77 4	16-103	9.82	ROCKY FORD UPST N. BALTIMORE WWTP- E BROADWAY ST	85	Cd,Cu,Pb,Zn,
OH76 24	16-200	2.13	OTTER CREEK E OF TOLEDO - MILLARD RD.	86	Pb,
OH76 24	16-200	4.00	OTTER CREEK AT TOLEDO - WHEELING ST.	86	Pb,
OH76 24	16-200	5.92	OTTER CREEK AT OREGON - OAKDALE AVE.	86	As,Zn,
OH80 23	05-055	0.13	CRESTLINE WWTP TRIB. NEAR MOUTH - OLDFIELD RD.	85	Pb,Zn,
OH80 24	05-056	1.12	CRESTLINE TRIB. AT OLDFIELD RD.	85	Cu,Pb,Zn,
OH83 3	05-051	5.20	MILLS CREEK NEAR CASTALIA - BOGART RD.	85	Cr,
OH83 3	05-051	0.07	MILLS CREEK AT SANDUSKY - MONROE ST.	85	Cr,Zn,
OH83 3	05-051	1.00	MILLS CREEK NEAR SANDUSKY - AT GOLF COURSE	85	Pb,
OH83 11	05-045	6.53	RACCOON CREEK N OF CLYDE - S.R. 412	83	Cd,
OH34 1.1	02-236	2.21	ROCK SWALE DITCH AT HEADWATERS CULVERT - S.R. 95	87	Pb,Zn,
OH34 1.1	02-236	0.01	ROCK SWALE DITCH SW OF MARION - AT MOUTH	87	Zn,
OH34 1.1	02-236	1.04	ROCK SWALE DITCH W OF MARION - KEENER PIKE	87	Pb,Zn,
OH35 27	02-001	176.75	SCIOTO R. 0.6 MI. DST CONFL L. SCIOTO R.	88	Cr,Zn,
OH34 1	02-158	6.63	L. SCIOTO R. AT MARION - HOLLAND RD.	88	Pb,Zn,
OH34 1.1	02-236	1.50	ROCK SWALE DITCH AT END OF FARMERS LANE	87	Pb,Zn,
OH35 1	02-109	18.14	MILL CREEK AT MARYSVILLE - CHERRY STREET	86	Cr,Cu,Pb,Zn,
OH35 1	02-109	11.70	MILL CREEK DST CONFL CROSSES RUN	86	Cr,
OH38 4	02-110	21.60	ALUM CREEK AT WESTERVILLE - UPST MAIN ST.	86	Cr,

Appendix D. (continued).

Waterbody ID No.	River Code	River Mile	Location	Year	Highly/Extremely Elevated Metals
OH43 1	02-500	3.80	PAINT CREEK AT CHILLICOTHE - S.R. 772	85	Cu,
OH45 1	02-800	8.15	SUNFISH CREEK AT TENNYSON - S.R. 772	87	Cd,Zn,
OH63 19.1	22-012	0.04	TRIB. TO WABASH R. AT FORT RECOVERY - ST. LOUIS RR	85	Cu,Zn,
OH25 23	01-001	87.32	HOCKING R. DST LANCASTER- 1ST U.S. RT. 33 BRIDGE	82	Cd,
OH89 1	19-001	7.10	CUYAHOGA R. AT CLEVELAND - LOWER HARVARD AVE.	85	Cd,Cu,Pb,Zn,
OH88 5	19-001	42.60	CUYAHOGA R. AT AKRON - CUYAHOGA ST.	85	Pb,Zn,
OH75 16	04-300	4.95	OTTAWA R. AT TOLEDO - STICKNEY AVE.	86	Cr,Pb,
OH43 1	02-500	1.89	PAINT CREEK DST MEAD PAPER CO.- S.R. 104	85	Cr,
OH20 31	17-600	15.73	WALHONDING R. AT NELLIE - U.S. RT. 36	86	Cr,
OH11 5	17-460	6.72	NIMISHILLEN CREEK DST N. INDUSTRY - HOWENSTINE RD.	87	Zn,
OH 4 34.1	08-308	0.03	CHEMLIME TRIB. NEAR LISBON - S.R. 518	85	Cd,Zn,
OH 2 27	18-030	0.53	MOSQUITO CREEK AT NILES - ROBBINS AVE.	83	As,Cd,Cu,Pb,Zn,
OH 6 24	06-800	1.64	WHEELING CREEK NEAR BRIDGEPORT - CO. RD 24	87	Pb,
OH34 1	02-158	2.65	L. SCIOTO R. AT MARION - S.R. 739	88	Cd,Pb,Zn,
OH24106	17-001	51.91	MUSKINGUM R. AT GOULD 001 OUTFALL	86	As,Cr,Cu,Pb,Zn,
OH60 33	14-001	77.20	GREAT MIAMI R. AT DAYTON - BROADWAY AVE.	89	Pb,
OH42 35	02-500	69.35	PAINT CREEK 0.1 MI. DST WASHINGTON C.H. WWTP	89	Pb,Zn,
OH42 35	02-500	69.52	PAINT CREEK UPST WASHINGTON C.H. WWTP - ELM ST.	89	Pb,
OH15 31	17-500	61.52	TUSCARAWAS R. UPST DOVER - S.R. 416	89	Cr,Zn,
OH37 13	02-400	22.35	OLENTANGY R. AT STRATFORD - U.S. RT. 23	89	Pb,
OH10 5	17-500	87.37	TUSCARAWAS R. AT MASSILLON - WARMINGTON ST.	89	Cr,
OH54 24	11-021	0.55	TURTLE CREEK 150 FT. DST CINCINNATI MILACRON 001	89	Pb,
OH68 17	04-200	37.91	OTTAWA R. UPST LIMA WWTP - ROAD DST DAM	89	Pb,
OH68 17	04-200	36.30	OTTAWA R. DST B.P. CHEMICAL CO.	89	Cr,Cu,Pb,Zn,
OH68 17	04-200	37.00	OTTAWA R. AT LIMA - UPST ADGATE RD.	89	Pb,
OH68 17	04-200	38.63	OTTAWA R. UPST LIMA WWTP - COLLETT ST.	89	Pb,
OH68 17	04-200	35.44	OTTAWA R. DST LIMA - SHAWNEE RD.	89	Cr,Pb,Zn,
OH67 6	04-160	22.00	BLANCHARD R. JUST DST OTTAWA WWTP	89	Cd,
OH66 3	04-160	57.73	BLANCHARD R. AT FINDLAY - MAIN ST./S.R. 15	89	Pb,
OH16 28	17-730	53.28	BLACK FORK MOHICAN R. AT SHELBY - MAIN ST.	89	Cd,Cr,Pb,Zn,
OH15 32	17-500	71.73	TUSCARAWAS R. AT BOLIVAR - S.R. 212	89	Cd,Cr,Pb,Zn,
OH10 29	17-541	0.01	HUDSON RUN AT BARBERTON - AT MOUTH	89	Pb,
OH10 1	17-500	73.67	TUSCARAWAS R. AT BOLIVAR - SHERMAN CHURCH AVE.	89	Cr,Pb,Zn,
OH68 11	04-200	28.85	OTTAWA R. AT ALLENTOWN - S.R. 81	86	Cr,Cu,Pb,Zn,
OH 2 1	18-001	11.57	MAHONING R. UPST LOWELLVILLE - P AND LE RR	83	As,Cd,Cr,Cu,Pb,Zn,
OH 2 1	18-001	11.57	MAHONING R. UPST LOWELLVILLE - P AND LE RR	86	Cr,Cu,Pb,Zn,
OH68 11	04-200	34.55	OTTAWA R. DST LIMA - WESTFIELD DRIVE	86	Cu,
OH66 4	04-224	2.45	OIL DITCH AT FINDLAY - DST CENTREX	83	Cd,Cu,Pb,Zn,
OH66 4	04-224	2.45	OIL DITCH AT FINDLAY - DST CENTREX	87	Cu,Pb,Zn,
OH75 2	04-002	2.13	DUCK CREEK AT TOLEDO - YORK ST.	86	Pb,
OH15 31	17-500	58.50	TUSCARAWAS R. AT DOVER - DST RR/UPST DAM	88	As,Cd,Cr,Pb,Zn,
OH15 31	17-500	59.27	TUSCARAWAS R. AT EMPIRE DETROIT STEEL OUTFALL	88	As,Cr,Cu,Pb,Zn,
OH15 31	17-500	59.64	TUSCARAWAS R. AT GREER STEEL 001 OUTFALL	88	Cd,Cr,Pb,Zn,
OH23 48	17-001	76.60	MUSKINGUM R. AT ZANESVILLE - DST ARMCO NEAR I-70	88	Cr,Pb,Zn,
OH24 92	17-001	33.70	MUSKINGUM R. UPST LUKE CHUTE DAM	86	Cr,Pb,Zn,
OH24106	17-001	51.74	MUSKINGUM R. AT J.P. IND. 001 OUTFALL	88	As,Cd,Cr,Cu,Pb,Zn,
OH24106	17-001	51.74	MUSKINGUM R. AT J.P. IND. 001 OUTFALL	86	Cr,Pb,Zn,
OH77 8	16-105	10.42	E. BR. PORTAGE R. 0.2 MI. UPST FOSTORIA WWTP	89	Pb,
OH77 8	16-105	6.18	E. BR. PORTAGE R. NW OF FOSTORIA - EAGLEVILLE RD	89	Cr,Cu,Pb,Zn,
OH35 1	02-109	18.33	MILL CREEK AT MARYSVILLE - JUST DST RAY LEWIS	86	Cu,Pb,Zn,
OH38 2	02-110	7.60	ALUM CREEK AT BEXLEY - BROAD ST.	86	Cd,Pb,Zn,
OH83 11	05-045	11.01	RACCOON CREEK JUST UPST CLYDE WWTP	83	Cr,Pb,Zn,
OH83 11	05-045	10.18	RACCOON CREEK N OF CLYDE - TWP. RD. 223	83	Pb,Zn,
OH83 11	05-045	10.18	RACCOON CREEK N OF CLYDE - TWP. RD. 223	86	Pb,Zn,
OH83 11	05-045	3.08	RACCOON CREEK NW OF VICKERY - U.S. RT. 6	83	Cd,
OH15 31	17-500	61.52	TUSCARAWAS R. UPST DOVER - S.R. 416	88	Cr,Zn,
OH15 31	17-500	60.50	TUSCARAWAS R. UPST DOVER - ISLAND NEAR GOLF COURSE	88	Cd,Cr,Pb,Zn,
OH15 19	17-500	38.80	TUSCARAWAS R. AT GNADENHUTTEN - 50 YDS. DST ALSCO 001	88	Cr,Zn,
OH23 15	17-001	67.80	MUSKINGUM R. AT DUNCAN FALLS - JUST DST OLD FERRO	88	Cr,Pb,Zn,
OH22 5	17-200	6.31	DILLON RESERVOIR 200 YDS. UPST DAM (RIGHT BANK)	88	Cr,
OH23 15	17-001	75.70	MUSKINGUM R. AT ZANESVILLE - LOCK 10 (IN THE LOCK)	86	Cr,Zn,

Appendix D. (continued).

Waterbody ID No.	River Code	River Mile	Location	Year	Highly/Extremely Elevated Metals
OH13 3	17-402	0.01	BROAD RUN NEAR STRASBURG - AT MOUTH	89	Zn,
OH11 1	17-450	4.20	SANDY CREEK E. OF BOLIVAR - ADJ DEUBER RD.	89	Zn,
	17-422	0.12	GOETTGE RUN AT DOVER - I-77	90	Zn,
OH89 1	19-001	4.30	CUYAHOGA R. AT KINGSBURY RUN RR BRIDGE (EAST SIDE)	85	Cd,Cr,Cu,Pb,Zn,
OH24 17	17-001	24.87	MUSKINGUM R. AT BEVERLY DAM	88	Zn,
OH89 [illegible]	19-001	4.79	CUYAHOGA R. AT CLEVELAND - UPST SHIP CHANNEL	85	Cd,Cr,Cu,Pb,Zn,
OH89 [illegible]	19-001	4.56	CUYAHOGA R. KINGSBURY RUN RR BRIDGE (MID-CHANNEL)	85	Cd,Cr,Cu,Pb,Zn,
OH83 11	05-045	13.20	RACCOON CREEK UPST CLYDE - LIMERICK RD.	83	Cd,
OH83 11	05-045	11.01	RACCOON CREEK AT CLYDE - UPST CLYDE WWTP	83	Cu,Pb,Zn,
OH17 21	17-725	0.28	LANG CREEK AT ASHLAND - 100 YDS. DST ASHLAND WWTP	84	Cu,Pb,Zn,
OH72 11	04-633	4.96	PRAIRIE CREEK DST BRYAN - SCOTT RD.	85	Cu,
OH83 11	05-045	11.32	RACCOON CREEK AT CLYDE - U.S. RT. 20	83	Cr,Pb,Zn,
OH83 11	05-045	11.32	RACCOON CREEK AT CLYDE - U.S. RT. 20	83	Pb,Zn,
OH11 6	17-468	1.93	HURFORD RUN AT CANTON - GAMBRINUS RD.	85	Cr,Pb,Zn,
OH11 6	17-468	1.93	HURFORD RUN AT CANTON - GAMBRINUS RD.	86	As,Cr,Pb,Zn,

Appendix E. Fish kills in Ohio recorded by the Ohio Department of Natural Resources from 1987 to 1988.

River	River Code	FIPS County Code	Year	Number Killed	Pollutant
TRIB. TO BAD CREEK		051	87	16	UNKNOWN
UNNAMED DITCH		011	87	50	HOG MANURE
TRIB. TO BLANCHARD RIVER		063	87	12	#2 FUEL OIL
LYTLE CREEK	11-212	027	87	705	ANTI-FREEZE
TRIB. TO WABASH CREEK		047	87	4361	FERTILIZER
BLUE RIDDLE RUN		031	87	27	DETERGENTS
TRIB. TO BEAR CREEK		051	87	2	DIESEL FUEL
BEAR CREEK	14-029	113	87	1000	CHEMICALS
MITCHELL RUN	02-452	117	87	150	DIESEL FUEL
ROCK CREEK	05-014	147	87	500	UNKNOWN
TRIB. TO WABASH CREEK		047	87	460	FERTILIZER
COUNTY DITCH		137	87	69	UNKNOWN
OWL CREEK	04-615	069	87	458	UNKNOWN
YELLOW SPRINGS CREEK	11-040	057	87	61	FERTILIZER
BLACK FORK	09-730	053	87	6729	ACID MINE WATER
SYMMES CREEK	09-700	087	87	6729	ACID MINE WATER
BIG RUN	02-455	117	87	3136	CATTLE MANURE
CHAPMAN CREEK	14-120	021	87	20	HOG MANURE
MILL CREEK	02-109	159	87	8047	FERTILIZER
SECOND CREEK	11-203	027	87	3205	FLOOR CLEANER
CHAGRIN RIVER	15-001	035	87	31	UNKNOWN
CAMP CREEK	02-805	131	87	11	HOG MANURE
UNNAMED STREAM		085	87	6	UNKNOWN
DIXON BRANCH	14-422	135	87	879	UNKNOWN
TRIB. TO MAHONING RIVER		151	87	13	UNKNOWN
NIMISHILLEN CREEK	17-460	151	87	4	UNKNOWN
SCIOTO BIG RUN	02-092	049	87	1872	UNKNOWN
LITTLE HOCKING RIVER	17-900	167	87	22	UNKNOWN
TRIB. TO DUCK CREEK		167	87	64	SULFURIC ACID
MANAHAN CREEK		003	87	230	FERTILIZER
AUGLAIZE RIVER	04-100	003	87	230	FERTILIZER
TRIB. TO PAWPAW CREEK		045	87	496	FERTILIZER
SCIPPO CREEK	02-069	129	87	9740	XYLENE
BEAN CREEK		113	87	50	SEWAGE
SUGAR CREEK	17-400	169	87	482	UNKNOWN
BUCK RUN	11-305	027	87	70	HOG MANURE
DUCK CREEK	06-300	167	87	259	UNKNOWN
TWOMILE CREEK	04-234	011	87	152	UNKNOWN
NORTH TURKEYFOOT CREEK	04-037	051	87	25207	CHEMICALS, SEWAGE
BLACK FORK MOHICAN RIVER	17-730	139	87	10	COAL ASH
SWAN CREEK	04-003	095	87	2227	SEWAGE
FREED DITCH		003	87	192	SEWAGE
SCIOTO RIVER	02-001	101	87	15081	SEWAGE, GLYCOL
CAMP CREEK	02-805	131	87	11	HOG MANURE
BEAR CREEK	04-029	113	87	774	SEWAGE
SUNFISH CREEK	06-700	111	87	4691	SEWAGE
PAINTER CREEK	14-208	037	87	1349	HOG MANURE
OHIO RIVER	90-001	061	87	12	UNKNOWN
KOKOSING RIVER	17-650	083	87	76	SEWAGE
VALLEY RUN	17-321	119	87	1982	SEPTIC SYSTEM SEWAGE
TRIB. TO MILL CREEK		017	87	20	SEWAGE
CROOKED CREEK	02-036	131	87	191	LOW PH
POSSUM RUN	14-085	091	87	7	GASOLINE
CLEAR CREEK	14-024	165	87	32	PAPER WASTES
RUSH CREEK	01-500	045	87	10923	SEWAGE

Appendix E. (continued).

River	River Code	FIPS County Code	Year	Number Killed	Pollutant
UNNAMED STREAM		033	87	17	UNKNOWN
HELLBRANCH RUN	02-204	045	87	33	SEWAGE
RAMP CREEK	17-232	089	87	12694	CLEANING SOLUTION
MILL CREEK	18-020	029	87	738	HOG MANURE
WALNUT CREEK	02-078	045	87	10719	SULFITE LIQUOR
HEBBLE CREEK	14-147	057	87	874	SWIMMING POOL DISCH.
BRUSH CREEK	04-614	051	87	75	SEWAGE
FLAT FORK	04-231	003	87	50	SEWAGE
SCIOTO RIVER	02-001	129	87	8	SEWAGE
SANDUSKY RIVER	05-001	175	87	7637	SEWAGE
FOURMILE CREEK	14-400	017	87	12771	SEWAGE
SPRING CREEK	14-050	149	87	75	MANURE
TAYLOR CREEK	02-181	065	87	4001	UNKNOWN
LOST CREEK	04-214	003	87	120	FABRIC SOFTENER
BIG RUN	02-455	117	87	200	MANURE
FEDERAL CREEK	01-100	009	87	551	OIL WELL SOLVENT
SPRING RUN	05-301	175	87	3226	GASOLINE
MUD BROOK	19-024	153	87	19	#2 FUEL OIL
FLATROCK CREEK	04-109	125	87	241	SEWAGE
LYTLE CREEK	11-212	027	87	460	SEWAGE
POWDER LICK RUN		159	87	6	CHICKEN MANURE
JENNINGS CREEK	04-230	003	87	65924	HOG MANURE
INDIAN CREEK	14-010	017	87	1943	SEWAGE
CLEAR CREEK	14-024	113	87	1000	SEWAGE
GANDER RUN	02-179	065	87	40	FERTILIZER
TRIB. TO PIPES FORK		019	87	12	BRINE
LITTLE DARBY CREEK	02-210	021	87	36767	FERTILIZER
LITTLE ULREY RUN		025	87	14	FUEL OIL
MUSKINGUM RIVER	17-001	115	88	2000	SEWAGE, THERMAL
RACCOON CREEK	09-500	053	88	308	UNKNOWN
LITTLE ULREY RUN		025	88	14	FUEL OIL
ORTON CREEK		055	88	3	FUEL OIL
SUGAR CREEK	05-010	147	88	683	TOLUENE
SANDUSKY RIVER	05-001	147	88	683	TOLUENE
JENKS CREEK		055	88	6	FUEL OIL
SYMMES CREEK	09-700	079	88	7	UNKNOWN
RACCOON CREEK	17-221	089	88	6	PETROLEUM PRODUCTS
TRIB. TO BRUBAKER CREEK		139	88	260	FERTILIZERS
BEAVER RUN	17-233	089	88	155	SEWAGE + IND. WASTE
COWLES CREEK	07-007	007	88	83	SEWAGE
SYCAMORE CREEK	02-085	045	88	4415	OIL AND AMMONIA
SYCAMORE CREEK	17-262	089	88	19494	FERTILIZER
SYCAMORE CREEK	17-262	089	88	19495	FERTILIZER
TRIB. TO NIMISHILLEN CR.		151	88	465	UNKNOWN
ALUM CREEK	02-110	049	88	72	UNKNOWN
MARGARET CREEK	01-024	009	88	42	ACID MINE WATER
OLDTOWN RUN	02-518	141	88	2623	FERTILIZER
SANDY CREEK	17-450	151	88	7540	ANHYDROUS AMMONIA
STERLING CREEK	10-413	015	88	153	SEWAGE
BLACK RIVER	20-001	093	88	53	SEWAGE
BLANCHARD RIVER	04-160	063	88	180	SEWAGE
BRUSH CREEK	04-614	171	88	1240	WELL WATER (H2S)
TAYLOR CREEK	02-181	065	88	102	PHENOL
FLAT FORK	02-231	003	88	28	TOMATO PASTE
GRASSY CREEK	04-012	173	88	9	SEWAGE

Appendix E. Fish kills in Ohio recorded by the Ohio Department of Natrual Resources from 1987 to 1988.

River	River Code	FIPS County Code	Year	Number Killed	Pollutant
GREAT MIAMI RIVER	14-001	113	88	260800	THERMAL
TRIB. TO MAHONING RIVER		151	88	17	UNKNOWN
TRIB. TO M. FK. L. BEAVER		029	88	91	SEWAGE
SPRING FORK	02-211	097	88	2	SEWAGE AND ALGAE
SPRING FORK	02-211	097	88	54	SEWAGE AND ALGAE
SANDUSKY RIVER	05-001	033	88	4996	SEWAGE
SCIOTO RIVER	02-001	045	88	2	UNKNOWN
CROOKED CREEK	17-526	157	88	83	UNKNOWN
OHIO RIVER	90-001	061	88	20	UNKNOWN
TRIB. TO RED RUN		169	88	167	COW MANURE
TRIB. TO MOSQUITO CREEK		155	88	853	DISTILLERY WASTE H20
BROKEN KNIFE CREEK	05-209	033	88	44	UNKNOWN
PUSHETA CREEK	04-235	011	88	548	SEWAGE/ANIMAL BYPROD
SUGAR CREEK	17-400	157	88	30	UNKNOWN
GREAT MIAMI RIVER	14-001	109	88	4985	THERMAL
LITTLE MIAMI RIVER	11-001	025	88	1000	SEWAGE
PAINT CREEK	02-500	141	88	2577	PAPER WASTES
PLEASANT RUN	01-045	045	88	201	DETERGENTS
MILL CREEK	23-001	017	88	173	SEWAGE
RUSH CREEK	01-500	073	88	18	UNKNOWN
TODD FORK	11-200	027	88	353	SILO LIQUORS
OHIO RIVER	90-001	167	88	75	SEWAGE/CHLOROBENZENE
EUCLID CREEK	19-041	035	88	1932	AMMONIA SOLUTION
MILL CREEK	23-001	061	88	6	FUEL OIL
JENNINGS CREEK	04-230	161	88	1098	AMMONIA SOLUTION

Appendix F. River segments with moderate, major and extreme levels of fecal coliform bacteria and probable source of bacteria in Ohio rivers from 1984 to 1988.

River Code- RM	Year	River	Fecal Coliform #/100 ml	Exceedance	Source[1]
01- 001 - 87.3	87	Hocking River	>60000	Extreme	WWTP
01- 001 - 87.3	88	Hocking River	>60000	Extreme	WWTP
01- 001 - 27.8	88	Hocking River	8000	Moderate	WWTP
02- 001 - 203.4	84	Scioto River	6000	Moderate	WWTP
02- 001 - 129.8	88	Scioto River	40000	Major	CSOs
02- 001 - 127.7	87	Scioto River	80000	Extreme	WWTP
02- 001 - 127.7	88	Scioto River	>60000	Extreme	WWTP
02- 001 - 124.4	88	Scioto River	6000	Moderate	WWTP
02- 001 - 119.9	87	Scioto River	17000	Major	WWTP
02- 001 - 115.3	87	Scioto River	16500	Major	WWTP
02- 100 - 65.8	88	Big Walnut Creek	>60000	Extreme	OSTS
02- 109 - 18.1	87	Mill Creek	21000	Major	WWTP
02- 109 - 18.1	88	Mill Creek	8000	Moderate	WWTP
02- 181 - 0.8	84	Taylor Creek	>60000	Extreme	CSOs
02- 188 - 0.7	84	Cottonwood Ditch	>60000	Extreme	WWTP
02- 200 - 46.9	88	Big Darby Creek	43000	Major	WWTP
02- 210 - 19.5	88	Little Darby Creek	15000	Major	OSTS
02- 211 - 1.6	88	Spring Fork	35000	Major	OSTS
02- 211 - 0.8	88	Spring Fork	5910	Moderate	OSTS
02- 223 - 1.5	88	Flat Branch	9000	Moderate	WWTP
02- 244 - 0.1	86	South Branch Republican Run	58000	Major	OSTS
02- 250 - 3.1	88	Trib. to Rock Fork (RM 10.42)	42000	Major	WWTP
02- 320 - 0.5	85	Jones Ditch	21000	Major	CSOs
02- 322 - 0.2	88	Childrens Home Ditch	5600	Moderate	OSTS
02- 400 - 11.5	88	Olentangy River	12000	Major	WWTP
02- 400 - 3.9	87	Olentangy River	>60000	Extreme	CSOs
02- 400 - 1.9	87	Olentangy River	21000	Major	CSOs
02- 400 - 1.3	87	Olentangy River	23000	Major	CSOs
02- 610 - 21.9	86	Little Salt Creek	34000	Major	WWTP
04- 227 - 0.7	88	Trib. to Little Auglaize River	5100	Moderate	WWTP
04- 230 - 4.8	88	Jennings Creek	20000	Major	WWTP
04- 230 - 2.3	88	Jennings Creek	20000	Major	WWTP
04- 231 - 3.3	88	Flat Fork	19000	Major	CSOs
04- 300 - 6.4	86	Ottawa River	540000	Extreme	CSOs
04- 633 - 8.0	84	Prairie Creek	>60000	Extreme	WWTP
05- 051 - 6.0	84	Mills Creek	37000	Major	WWTP
08- 206 - 0.1	85	East Branch M. Fk. Little Beaver Cr	5800	Moderate	WWTP
09- 039 - 0.2	87	Little Chickamauga Creek	>60000	Extreme	CSOs
09- 524 - 0.7	84	Meadow Run	36000	Major	WWTP
09- 735 - 1.2	85	Huntingcamp Creek	>60000	Extreme	WWTP
10- 200 - 30.5	87	Ohio Brush Creek	14000	Major	WWTP
10- 230 - 2.7	87	Elk Fork	8000	Moderate	NPS
10- 248 - 2.2	87	Shimer Run	>60000	Extreme	WWTP
10- 248 - 0.1	87	Shimer Run	5700	Moderate	WWTP
10- 250 - 0.7	87	Trib. to W. Fk. Ohio Brush Cr.	>60000	Extreme	WWTP
11- 212 - 7.0	84	Lytle Creek	10000	Major	WWTP
14- 100 - 51.0	84	Mad River	5900	Moderate	NPS
14- 117 - 4.1	84	Moore Run	>60000	Extreme	WWTP
14- 128 - 0.1	84	Dugan Run	>60000	Extreme	CSOs
14- 136 - 0.1	86	Kings Creek	46000	Major	NPS
14- 137 - 0.5	86	Glady Creek	>60000	Extreme	NPS
14- 139 - 0.1	86	Macochee Creek	>60000	Extreme	NPS
14- 238 - 7.0	87	North Fork Stillwater River	28000	Major	NPS
14- 400 - 38.1	88	Fourmile Creek	>60000	Extreme	NPS
14- 400 - 24.8	88	Fourmile Creek	>60000	Extreme	NPS
14- 404 - 2.8	88	Little Fourmile Creek	9000	Moderate	NPS
14- 405 - 0.1	88	East Fork Fourmile Creek	6000	Moderate	NPS
14- 500 - 34.9	86	Twin Creek	>60000	Extreme	WWTP
14- 516 - 0.3	86	Reigle Ditch	>60000	Extreme	WWTP

Appendix F. (continued).

River Code- RM	Year	River	Fecal Coliform #/100 ml	Exceedance	Source[1]
16- 105 - 10.4	88	East Branch Portage River	5100	Moderate	CSOs
16- 105 - 10.2	88	East Branch Portage River	6300	Moderate	WWTP
16- 105 - 9.0	88	East Branch Portage River	11800	Major	WWTP
16- 105 - 6.2	88	East Branch Portage River	9000	Moderate	WWTP
16- 105 - 1.9	88	East Branch Portage River	20000	Major	WWTP
16- 105 - 0.8	88	East Branch Portage River	20000	Major	WWTP
17- 200 - 26.8	87	Licking River	>60000	Extreme	WWTP
17- 200 - 26.8	88	Licking River	9000	Moderate	WWTP
17- 211 - 0.2	86	Lost Run	22000	Major	NPS
17- 214 - 0.2	86	Painter Run	25000	Major	NPS
17- 215 - 0.5	86	Long Run	48000	Major	NPS
17- 220 - 12.7	84	South Fork Licking River	35000	Major	WWTP
17- 221 - 26.2	87	Raccoon Creek	5100	Moderate	NPS
17- 221 - 23.9	87	Raccoon Creek	12000	Major	CSOs
17- 221 - 23.7	87	Raccoon Creek	16000	Major	WWTP
17- 221 - 21.5	87	Raccoon Creek	6000	Moderate	WWTP
17- 500 - 87.4	87	Tuscarawas River	6000	Moderate	WWTP
17- 650 - 48.4	87	Kokosing River	22000	Major	NPS
17- 650 - 46.4	87	Kokosing River	7000	Moderate	NPS
17- 650 - 45.4	87	Kokosing River	13000	Major	NPS
17- 650 - 40.4	87	Kokosing River	25000	Major	NPS
17- 650 - 35.1	87	Kokosing River	25000	Major	NPS
17- 650 - 30.6	87	Kokosing River	21000	Major	NPS
17- 655 - 6.3	87	Little Jelloway Creek	5700	Moderate	NPS
17- 674 - 11.7	87	North Branch Kokosing River	13000	Major	CSOs
17- 726 - 1.2	84	Jamison Creek	5500	Moderate	CSOs
17- 727 - 0.1	84	Town Run	20000	Major	CSOs
17- 800 - 68.1	84	Wills Creek	29000	Major	WWTP
17- 840 - 23.8	84	Leatherwood Creek	>60000	Extreme	WWTP
17- 894 - 0.5	87	Trib. to Buffalo Fork (Cumberland)	10000	Major	OSTS
18- 001 - 10.8	87	Mahoning River	15000	Major	WWTP
18- 001 - 10.8	88	Mahoning River	33000	Major	WWTP

Appendix G. Acronyms used in the 1990 305(b) report.

Acronym	Meaning
AMD	Acid mine drainage
AoC	Area of Concern (IJC)
BPJ	Best Professional Judgement
CSO	Combined sewer overflow
CWA	Clean Water Act
CWH	Cold Water Habitat
DNR	Department of Natural Resources
ECBP	Eastern Corn Belt Plains
ELEH	Excepted Lake Erie Habitat
EOLP	Erie-Ontario Lake Plain ecoregion
EPA	Environmental Protection Agency
EWH	Exceptional Warmwater Habitat
FDA	Food and Drug Administration
GLISP	Great Lakes International Surveillance Plan
HELP	Huron-Erie Lake Plain ecoregion
IBI	Index of Biotic Integrity
ICI	Invertebrate Community Index
IJC	International Joint Commission
Iwb	Index of Well-Being
IP	Interior Plateua ecoregion
LEH	Lake Erie Habitat
LRW	Limited Resource Water
MWH	Modified Warmwater Habitat
NASQAN	National Stream Quality Accounting Network
NAWQM	National Ambient Water Quality Monitoring Network
NEPA	National Environmental Policy Act
NP	Nuisance Prevention
OAC	Ohio Administrative Code
ODA	Ohio Department of Agriculture
ODH	Ohio Department of Health
ODNR	Ohio Department of Natural Resources
PAH	polynuclear aromatic hydrocarbons
PCB	polychlorinated biphenols
POTW	publicly owned treatment works
PWS	Public Water Supply
QHEI	Qualitative Habitat Evaluation Index
RAP	Remedial Action Plan
SCORP	Statewide Comprehensive Outdoor Recreation Plan
SRW	State Resource Water
SS	Seasonal Salmonid Habitat
TMACOG	Toledo Metropolitan Area Council of Governments
USGS	United States Geological Survey
WAP	Western Allegheny Plateau ecoregion
WQA	Water Quality Act of 1987
WQS	Water quality standards
WWH	Warmwater Habitat
WWTP	Wastewater treatment plant

Glossary

Acute - Acute involves a stimulus severe enough to rapidly induce a response; in toxicity tests a response observed in 96 hours or less typically is considered acute. An acute effect is not always measured in terms of lethality; it can measure a variety of effects[1]

Acute (Chemical) Criteria - Water quality standard in Ohio that is designed to protect the Limited Resource Waters (Nuisance Prevention) aquatic life use; this criteria is less stringent than the chronic criteria and is designed to protect aquatic life from rapidly induced stresses.

Aquatic Life Use - A designation assigned to a waterbody in Ohio based on the *potential* aquatic life that the water can sustain given the ecoregion potential; (See EWH, WWH, CWH, LRW, Designated use).

Aquatic Life Use Attainment - Defined as the condition when a waterbody has demonstrated, through the use of ambient biological and/or chemical data, that it does not significantly violate biological or water quality criteria for that use.

Bioassay - The procedure of exposing test organisms, in a laboratory setting, to various concentrations of of suspected toxicants or dilutions of whole effluent to determine the lethality of the solution[2](See Whole Effluent Bioassay).

Biological (Biotic) Integrity - The ability of an aquatic community to support and maintain a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of the natural habitats within a region (taken from: Ohio EPA 1987; Karr et al. 1986).

Biosurvey - In field (ambient) sampling of resident biological organisms to assess biological integrity. For Ohio the accepted methods include pulsed-DC methods of electrofishing for sampling fish and, for sampling macroinvertebrates, Hester-Dendy Multiple Plate Artificial Substrate Samplers and dip nets. Other synonyms: ambient (or instream) biological sampling, biosurveillance[2].

Channelization - General term applied to stream channel modifications, usually designed to improve drainage of fields and/or prevent flooding, which include channel straightening and widening and often is associated with riparian vegetation removal; these activities almost always result in degraded biological integrity via habitat loss and trophic disturbances.

Chemical Specific Approach - Traditional water quality approach of regulating point sources by setting surrogate water quality criteria (allowable concentrations of individual chemicals in the water), that if not violated instream, should protect aquatic life and maintain aquatic life uses.

Chronic - Chronic involves a stimulus that lingers or continues for a relatively long period of time, often one-tenth of the life span or more. Chronic should be considered a relative term depending on the life span of the organism. A chronic effect can be lethality, growth, reduced reproduction, etc.

Chronic (Chemical) Criteria - Water quality standard in Ohio that is designed to protect the Warmwater and Exceptional Warmwater aquatic

life uses by preventing long-term stresses to organisms that would affect growth, reproduction. etc.,; this criteria is more stringent than the acute criteria.

Clean Water Act - An act of the US Congress, first passed in 1972, which provides the legal framework for reducing pollutants to America's waters. This report is required by a section (305(b)) of that report.

Combined Sewer Overflow (CSO) - Combined sewers are sewers with sanitary wastes and storm water runoff in the same pipes; a combined sewer overflow is the location where storm water and municipal wastes are discharged to streams during rainfall events when the increased amount of flow cannot be carried by the sewer system to the WWTP.

Conventional Pollutants - Refers to pollutants commonly discharged by municipal WWTPs as by-products of the treatment process such as ammonia, nitrite, dissolved oxygen, and chlorine. These may also be constituents of urban and agricultural nonpoint runoff.

Criteria - The conditions presumed to support or protect a designated use (*e.g.*, WWH or MWH)[2].

Degradation - A lowering of the existing water quality or biological condition in Ohio's surface waters.

Designated Use - The purpose or benefit to be derived from a waterbody, *e.g.*, drinking water, aquatic life[2].

Dilution Screening - Mass-balance analysis of pollutants discharged based on point source discharge flow, the critical low flow of the stream (*e.g.*, $Q_7 10$), and the concentration of a parameter in the effluent. Predicted instream concentrations are compared to the criteria for a given value and examined for WQS exceedences.

Ecoregion - Regions of geographic similarity based on an overlay of maps of land-surface form, soils, land use, and potential natural vegetation; such regions are likely to contain similar aquatic communities.

Ecoregion Criteria - Biological index values that represent the base level of what minimally impacted communities should achieve in a particular ecoregion.

Effluent - Term given to the wastewater discharge of a WWTP or industry.

Electrofishing - Method of collecting fish by stunning them with electrical current from a gas-powered generator; the stun is temporary and fish are released unharmed after processing. Processing includes species identification, counting, weighing, and examining for external anomalies. These results are used to calculate the Index of Biotic Integrity (IBI) and the modified Index of Well-Being (Iwb).

Eutrophic - This refers to a highly "productive" body of water that has high concentrations of organic matter, nutrients, and algae.

Evaluated Data - This refers to data used in this report that originated from sources *OTHER* than intensive surveys of biological or chemical conditions; these sources include predictive modeling, the nonpoint source survey, citizen complaints, and chemical data > 5 yrs old.

Exceptional Warmwater Habitat (EWH) - Aquatic life use designed to protect aquatic communities of exceptional diversity and biotic integrity; such communities usually have high species richness, often support rare and endangered species and/or an exceptional sport fishery.

FDA action limit - The "safety" limits for concentrations of compounds in fish flesh that above which consumption of the flesh carries some risk of cancer or other health problem.

Fecal Coliform - A bacteria group that is present in the intestines of warm-blooded animals and is evidence of the presence of human or animal wastes.

Fish Consumption Advisory - In Ohio, a notice to the public warning about specific areas with fish tissue contamination by toxic chemicals that exceed FDA action limits; advisories may be species specific or community wide. The decision to issue an advisory is based on an agreement between the Ohio EPA, Ohio Dept. of Natural Resources, the Ohio Dept. of Agriculture, and the Ohio Dept. of Health

Hester-Dendy Multiple Plate Sampler - A sampling device for macroinvertebrates which consists of a set of square hardboard plates (approximately a surface area of one square foot) separated by spacers of increasing width. Aquatic macroinvertebrates colonize or reproduce on this device which is placed instream for six weeks during the summer. Counts of individuals and species are used in calculation of the Invertebrate Community Index (ICI). (See Invertebrate Community Index).

Impacted - This refers to the situation where there is suspected impairment based on the presence of sources (*e.g.*, nonpoint source survey). In such cases there is evidence that some changes or disturbance has occurred to the stream, but there is no quantitative data to establish whether aquatic life uses are actually being impaired.

Impaired - This refers to the situation where there is monitored level data that establishes a violation of some water quality or biological criterion, and hence, an impairment of the designated use .

Index of Biotic Integrity (IBI) - An ecologically-based index that uses fish community data and summarizes them as 12 ecological metrics that can be classified into three categories: species richness, species composition, trophic composition, and fish density and condition (Karr 1981; Karr *et al.* 1986).

Index of Well-Being (Iwb) - A composite index of diversity and abundance measures (density and biomass) based on fish community data (Gammon 1976; Gammon *et al.* 1981).

Invertebrate Community Index (ICI) - An index of biological condition based on ten metrics that measure various structural and tolerance components of macroinvertebrate communities in Ohio streams (DeShon *et al.*, unpublished; OhioEPA 1987).

In-Place Pollutants - Refers to pollutants deposited in the sediments of a waterbody (*i.e.*, therefore they are "in-place").

LC50 - the concentration of some tested substance in a suitable dilutant at which 50% of the organisms die in a specified period of exposure.

Limited Resource Water (LRW) - An aquatic life use assigned to those streams with very limited aquatic life potential, usually restricted to mine drainage streams or very small streams (<3 sq. mi. drainage area) in urban areas with limited or no flow during the summer

Long List - List of all impaired waterbody segments for all causes and sources pursuant to Section 304(l) of the 1987 Water Quality Act (WQA).

Major Cause or Source - The primary cause or source for a stream segment not attaining its designated use.

Mass Balance Analysis - See dilution analysis

Medium ("Mini") List - List of all stream segments impaired by toxic substances, including ammonia, chlorine, and toxicity detected by whole effluent bioassays. This a subset of the long list and is pursuant to Section 304(l) of the 1987 Water Quality Act (WQA).

Metals - Specific class of chemical elements that have unique characteristics (such as conductance); some of the metals commonly found in water or sediment as pollutants include lead, copper, cadmium, arsenic, silver, zinc, iron, mercury, and nickel.

Moderate Cause or Source - A secondary or contributing (but not primary) cause or source of impairment of a designated use.

Modified Warmwater Habitat (MWH) - Aquatic life use assigned to streams that have irretrievable, extensive, man induced modifications that preclude attainment of the Warmwater Habitat Use (WWH); such streams are characterized by species that are tolerant of poor chemical quality (fluctuating dissolved oxygen) and habitat conditions (siltation, habitat simplification) that often occur in modified streams.

Monitored Data - This refers to chemical or biological data used in this report that originated from sources such as intensive surveys of biological or chemical conditions; chemical data must be less than 5 yrs old.

Named Stream - Streams large enough to be named on USGS 71/2 minute topographic maps and listed in the Gazateer of Ohio streams; there are approximately 22,000 miles of named streams in Ohio.

Natural Conditions - Those conditions that are measured outside the influence of anthropogenic activities.

Non-conventional Pollutant - Toxic pollutants *other* than the common nitrogen compounds (ammonia, nitrite), dissolved oxygen, or chlorine; examples of non-conventional pollutants are pesticides, herbicides, other organic compounds, and heavy metals.

Nonpoint Pollution Source - Diffuse sources of pollutants such as urban storm water, construction, farms and mines that are usually delivered to waterbodies via rain runoff and water infiltration.

Point Source of Pollution - Any source of pollution that arises from a single identifiable point, such as a discharge pipe of an industry or WWTP.

Pollutant Loading - Amount (mass) of a compound discharged into a waterbody per unit of time, for example, kg/day.

Priority Pollutant - One of the 126 toxic compounds (a subset of 65 classes of toxic compounds). (See 304(l))

QHEI (Qualitative Habitat Evaluation Index) - A qualitative habitat index designed as a screening tool to help in assigning designated uses and as an aid in interpreting changes in aquatic communities.

Recreation Use - Ohio designated uses related to human body contact (*i.e.*, swimming, wading, canoeing).

Reference Site - A relative unimpacted biosurvey site that is used to define the expected or potential biological community within a region such as a ecoregion; in Ohio reference sites were used to calibrate the ICI and IBI.

Rheophilic - Organisms that are "current loving"; usually reserved for organisms that are obligate riffle dwellers.

Short List - A list of point sources that discharge one or more priority pollutants of a quantity sufficient to substantially impair the designated use(s) of the receiving waterbody segment; a subset of the medium list and is defined pursuant to Section 304(l) of the 1987 Water Quality Act (WQA)

Stream Miles - Ohio's method of indicating locations along a stream; mileage is defined as the linear distance starting from a streams terminus (*i.e.*, mouth) and moving in an upstream direction.

Storm Sewer - System to collect and remove rain runoff from communities and discharge it to nearby waterways.

Surrogate Measures of Biotic Integrity - Chemical parameters designed to protect aquatic life if they are not exceeded instream. Because they are indirect measures of aquatic community integrity, and mostly derived from laboratory toxicity tests, they are termed "surrogate" (*i.e.*, substitute) measures of biotic integrity.

Threatened Streams - These are streams that are currently meeting their designated uses but because of obvious trends (see urban encroachment) or qualitative data are thought to be declining in quality and may become degraded in the future without changes in current practices.

Toxic Substances - Any substance that can cause death, abnormalities, disease, mutations, cancer, deformities, or reproductive malfunctions in an organism.

Unnamed Stream - Small streams for which there are no names provided on USGS 71/2 minute topographic maps; there are approximately 22,000 miles of unnamed streams in Ohio.

Urban Encroachment - Increased development in a watershed, especially where it affects the floodplain, riparian zone, and runoff characteristics of a basin.

Use Designation - See "Designated Use".

Wasteload Allocation - The portion of a streams capacity to assimilate pollutants without violating water quality standards allotted to existing (or future) point sources (*e.g.*, WWTPs)[1]; *i.e.*, the loading (kg/day) of a pollutant allowed to be discharged by a source without violating water quality standards.

Waterbody/Waterbody Segment - A length of stream, based on Ohio EPA's mapping system (Division of Environmental Planning and Management), defined for analysis of water quality trends for this report. Each stream segment is approximately 10 miles in length; there are over 3800 stream segments currently defined for Ohio. Each lake is also a separate waterbody.

Water Quality Act of 1987 - A bill that reauthorized and amended the Clean Water Act and added some additional sections (e.g. see 304(l))

Water Quality Based Effluent Limits - Parameter by parameter effluent limits for individual point source dischargers based on water quality considerations (criteria) and not a technological approach such as mandating a specific type of technology to be used in treatment.

Water Quality Limited Segment - Any segment where it is known that water quality does not meet applicable water quality standards and is not expected to meet applicable water quality standards even after the application of "Best Practical Waste Treatment Technology" by publically owned treatment works and the application of "Best Available Technology Economically Achievable" by point sources other than publically owned treatment works[1].

Water Quality Standards - The rules set forth for establishing stream use designations and water quality criteria protective of such uses the surface waters of the state[1].

Whole Effluent Toxicity - The collective toxicity of an effluent to bioassay test organisms expressed as the LC50 and irrespective of individual chemical concentrations. The procedure includes exposing test organisms, in a laboratory setting, to dilutions of whole effluent[2] (See Whole Effluent Bioassay). For complex effluents with many compounds, whole effluent toxicity testing is a more realistic predictor of effects on the instream biota than parameter by parameter chemical testing.

305(b) - Section of the Clean Water Act that requires a biennial report to assess the progress of the Clean Water Act programs.

304(l) - Section of the Water Quality Act of 1987 that is intended to accelerate the control of toxic discharges from point sources.

307(a) - Section of the Clean Water Act that lists 126 compounds denoted as "priority" pollutants; these compounds have historically been the focus of the U. S. EPA water quality program with the reasoning that removal of these priority compounds will also remove the 65 classes of compounds (thousands of individual compounds of which the priority pollutants are a subset).

---

[1]Taken from : USEPA. 1987. OhioEPA User's Manual for Wasteload Allocation, Water Quality Modeling

[2] Taken from: USEPA. 1987. Report of the National Workshop on Instream Biological Monitoring and Criteria. USEPA Office

A Comparison of Aquatic Life Use Impairment Detection and its Causes between an Integrated, Biosurvey-Based Environmental Assessment and its Water Column Chemistry Subcomponent.

Appendix I

Ohio Water Resource Inventory (Vol 1)

Fri, Jun 15, 1990

Edward T. Rankin
Chris O. Yoder

Ecological Assessment Section
Division of Water Quality Planning & Assessment
Ohio EPA
1030 King Avenue
Columbus, Ohio 43212

Introduction

Many state water pollution monitoring programs rely largely on ambient chemical sampling in streams and rivers to determine compliance with the biological goals and objectives of the Clean Water Act. Because the criteria on which these chemical parameters are based are derived from the toxicological responses of fish and macroinvertebrates in laboratory studies, these ambient criteria, when applied correctly, are assumed to be protective of the aquatic life.

Recent work using direct measures of the response of instream biological communities to pollution and other impacts suggests that simple, ambient chemical characterization of surface water resource impacts is insufficient to detect many of the impairments that negatively affect the biological integrity of streams and rivers (Karr *et al.* 1986; Ohio EPA 1988; Yoder 1989). The implications of this deficiency include an underestimate of the extent of stream miles in the U.S. that have impaired aquatic life uses and a bias towards chemical pollutants in estimates of relative contributions of the causes and sources of biological impairment.

The objectives of this paper are to: (1) compare an integrated, biosurvey-based approach and a water column chemistry-only approach as tools for detecting aquatic life impairment and its causes in segments of streams and rivers, and (2) examine the site-specific response of the biota, to ambient concentrations of 16 commonly measured water quality parameters.

Background

Chemical-specific criteria have been the basis of water quality monitoring efforts for decades (even prior to the inception of the USEPA) because: (1) past efforts in water pollution control have focused, almost exclusively, on point sources of pollution (municipal WWTPs and industries) where ambient chemical criteria are translated directly into discharge limits, (2) analytical and field survey techniques for biological community data were not well refined, (3) a working definition of "biological integrity" was not forthcoming, (4) biosurvey data had an unfortunate reputation of being too expensive, variable, or imprecise, and (5) chemical methods were thought to be more "precise" than biological assessments.

Accomplishments in the past ten years have shown the value of biological community data (termed biosurvey data in this paper) in integrating a wide range of impacts in streams and rivers and providing a direct measure of "biological integrity" (Karr 1981; Fausch et al. 1984, Karr et al. 1986). The Ohio EPA has used this approach to develop biological criteria for its inland rivers and streams based on stream size and ecoregion (Ohio EPA 1987a,b, 1989a,b; Yoder 1989). The Ohio EPA has used an integrated, biosurvey-based assessment

approach to determining aquatic life use attainment for its 305(b) report[1] on the status of its surface waters since 1988. Between 1986 and 1988 Ohio shifted from a report which relied on chemical surrogates and biological narrative descriptions (Ohio EPA 1986) to one based on ecoregion-based biological criteria integrated with various chemical and physical data (Ohio EPA 1988, 1990a). This change in approach decreased the proportion of Ohio's rivers and streams attaining aquatic uses from 61% to only 25% of monitored stream and river miles. This large shift prompted us to examine possible limitations of a surrogate, water column chemistry measure of aquatic life use attainment *alone*, especially in relation to potential underestimation in the relative magnitude of chemical and non-chemical factors on the impairment of aquatic life. The purpose of this analysis is not to "prove" that biocriteria are a superior measure of aquatic life use attainment, but rather, to illustrate that an integrated chemical, physical, and biological assessment of a water resource is important to *accurate* water resource management.

Methods

Waterbody Analyses

Comparisons between an integrated biosurvey-based assessment and a water column chemistry only assessment of use attainment were made at the scale of a stream segment or "waterbody". Waterbodies averaged 10.6 miles in length (range: 0.5 - 41.2 mi). The aquatic life attainment status and the related causes and sources of aquatic life impairment in each waterbody stream segment were taken from Ohio's 1990 305(b) Report (1990a,b). Only segments where biological community data (fish, macroinvertebrates, or both groups) was available were used in the analyses (826 possible waterbodies). Ambient grab sample water chemistry data (typically 1 to 13 samples per site: average = 3.6 samples per site) was available from 645 segments of the 826 waterbodies with biological community data. We examined parameters that are typically monitored by state agencies: copper[2], cadmium, zinc, lead, chromium, nickel, dissolved oxygen, pH, unionized ammonia, total phosphorus, nitrate, and total Kjeldahl nitrogen (TKN). Sample collection and analysis followed Ohio EPA quality assurance practices (Ohio EPA 1989c).

The assessment of aquatic life use support and the assigning of causes and sources generally followed the guidelines set out in the *Guidelines for the Preparation of the 1990 State Water Quality Assessment (305(b)Report)* (U. S. EPA 1989). For segments with biosurvey data, physical habitat data, and chemical data the biota was the principal arbiter of aquatic life use attainment status. The rationale for using the biota as the principal arbiter of aquatic life use is discussed in Ohio EPA (1987a,b) and (Yoder 1989). The criteria for use attainment on the basis of the biological indices is summarized in Table 1. For chemical

[1]The biennial 305(b) report is required by the Clean Water Act of 1977 to track progress in pollution control efforts by the states.

[2]all heavy metals are measured as "total recoverable".

data we used the chemical criteria in Ohio's WQS and generally followed the U. S. EPA 1990 305(b) guidelines (U. S. EPA 1989) for assessing aquatic life support with chemical data only (Table 2).

For the nutrient parameters that lack formal aquatic life criteria in the Ohio WQS we compared ambient results to background values from a set of regional reference sites that provide ecoregional and statewide expectations under relatively unimpacted conditions. Background expectations were based on work in progress to examine the range of variability of water chemistry and sediment chemistry data collected in relatively unimpacted reference sites by ecoregion (the same sites used to develop the biological criteria). We considered moderate and major exceedances of these background concentrations (Table 3) to be an indication of aquatic life use impairment.

Site Specific Comparison

For site specific comparisons of the response of the biota to instream water chemistry we examined biological index scores and concentrations of 16 commonly measured chemical parameters at discrete stream locations. This differed from the summarized assessments in 5-10 mile waterbody segments desribed above. The primary objective was to examine the response of the biota to instream chemical concentrations as represented by a typical state monitoring program. Chemistry data was categorized into extreme, major, moderate, minor, or no water quality criteria violations (Table 2) or deviations from relatively unimpacted conditions (Table 3; for parameters lacking formal water quality criteria). The IBI and ICI were classified as exceptional (> 50), good (40-49), good-fair (30-39), fair-poor (20-29), poor and very poor for the IBI (12-19), poor for the ICI (10-19), and very poor for the ICI (< 10).[3] The number of sites for increasing "impact" categories for each chemical parameter were then summed into ranges of the Index of Biotic Integrity and the Invertebrate Community Index.

[3]These are general categories for these biological indices and do not correspond exactly to the narrative descriptions associated with Ohio's biocriteria.

Results

Waterbody Level Analyses

The agreement between the integrated biosurvey-based analysis and water chemistry-only analysis of aquatic life use impairment in waterbodies is illustrated in figure 1. The top panel of this figure portrays the level of agreement when only water quality standard violations are considered and the bottom panel portrays a broader analysis that adds elevated levels of nutrients (compared to ecoregion expectations) as indicators of impairment.

In situations where nutrients are not included in the analysis (see below and Figure 1, top panel) 49.8 % of the waterbodies were impaired or partially impaired based on the integrated analysis (i.e., biological impairment), but were not detected as impaired or partially impaired by the water chemistry data alone.

		Water Chemistry Only	
		Meeting	**Impaired**
Integrated	**Meeting**	12.5%	2.8%
Assessment	**Impaired**	49.8%	34.5%

In 12.5% of the waterbodies the integrated analysis and the water chemistry data concurred that there was no impairment.[4] Fewer than 2.8% of the segments showed impairment or partial impairment of the water chemistry parameters without a corresponding biological impairment. In 34.5% of the waterbodies the integrated analysis and the water chemistry analysis both agreed that the aquatic life use was impaired or partially impaired.

Figure 2 illustrates the causes of impairment based on the integrated analysis for each portion of the pie in the top panel of figure 1. An examination of the causes of aquatic life impairment in those segments where the biology was impaired, but where the chemistry data alone failed to detect an impairment, explains some of the discrepancies between these methods. The causes of impairment in these segments were largely organic enrichment/D.O., habitat, and siltation, three types of impacts (with the exception of low dissolved oxygen values) that are not directly measured by parameters with water quality criteria. The attribution of chemical causes of impairment in waterbodies that were not evident in the water chemistry data are related to: (1) insufficient characterization of the actual instream chemical regime by the ambient chemical monitoring, (2) knowledge of sources of these parameters in the waterbody or upstream of the segment, (3) concentrations of chemicals above detection, but below criteria thresholds that may suggest peaks or acute periods of exposure that are not represented in the grab sample results,(4) responses of the biota that indicate the chemistry sampling is not representative of the true instream exposure (e.g., as suggested by "response signatures" in the biological

[4]This percentage differs from the statewide percentage of total miles meeting aquatic life uses reported in Ohio's 1990 305(b) report because for this analysis a waterbody segment was counted as impaired even if a portion of the segment was meeting its aquatic life use.

communities) and, (5) impacts from parameters not measured in the water column, but suggested by effluent or other data (e.g., sediment chemistry). For example, a biologist may have information about the release of a substance into a stream that may not be evident in the grab water column chemistry samples, but the effects of which may be obvious in the response of the biota.

In segments lacking biological impairment, but with water quality standards violations (2.8% of the waterbodies) the water quality criteria violated were heavy metals (8 waterbodies), dissolved oxygen (9 waterbodies), and unionized ammonia (3 waterbodies). Examination of the specific waterbody segments revealed that copper was the metal most often above the water quality criteria (8 waterbodies) with elevated concentrations of lead and cadmium in only one waterbody each. Violations of the dissolved oxygen criteria in streams meeting biocriteria were most likely to occur in headwater streams or in streams in the Huron-Erie Lake Plain ecoregion. Headwater streams and streams in the HELP ecoregion are characterized by biotic assemblages more tolerant of low dissolved oxygen than those in larger stream or other ecoregions in Ohio.

In waterbody segments where the integrated analysis and the water chemistry analysis agreed that there was impairment (34.5% of waterbodies), we examined whether this agreement was genuine or purely coincidental. Genuine agreement was defined as situations where water chemistry was attributed as the cause of aquatic life impairment by both assessments, regardless of the specific parameter responsible. There was genuine agreement of some chemical contribution to impairment in greater than 90% of the waterbodies with impairment (Figure 3). In only 34% of these impaired waterbodies, however, were chemical causes the *only* reported cause of impairment (Figure 3). In 6% of the segments with chemical WQS violations (Figure 3) the integrated analysis suggested that *only* non-chemical causes were affecting the biota.[5]

When we examined the agreement between the integrated analysis and water chemistry analysis by specific types of chemical causes (i.e., metals, dissolved oxygen, pH, and unionized ammonia; Figure 2) there was less agreement. In the horizontal bar chart where the two approaches agree that waterbodies are impaired (Figure 2), it is possible for only four cause categories to exhibit concordance (shaded portions of bars) between the integrated and water chemistry determination of causes. This is simply because the other categories lack formal water quality criteria or are not chemically expressed. There were 70 waterbodies that showed impairment by metals on the basis of water column chemistry and

[5]In its 305(b) report Ohio does not necessarily list as a cause of impairment some factor which may be above a threshold or criteria (e.g., water quality criteria), but which presently is not a *predominant* impact on the biota. For example, the presence on some nonpoint "source" in the drainage basin of a waterbody that is extremely degraded by toxicity from metals would not be listed as a high or moderate "cause" of impairment. This does not preclude this nonpoint source from being listed in the future, if the existing problems are abated and it is later determined that this source *actually* has a predominant instream effect.

85 waterbodies with impairments attributed (at least partially) to metals on the basis of an integrated analysis. In only 36 segments did the listing of metals overlap as a cause of impairment (30.3% of 119 total segments with metals attributed as a cause). Unionized ammonia and dissolved oxygen showed greater overlap and agreement (Figure 2) between each analysis (dissolved oxygen: 129 waterbodies with water chemistry only, 185 waterbodies with an integrated analysis, and overlap in 112 waterbodies or 55% of 202 total segments; unionized ammonia: 104 waterbodies with water chemistry only, 81 waterbodies with an integrated analysis, and overlap in 66 waterbodies or 55% of 119 total segments). The parameter with the lowest agreement was pH (17 waterbodies with water chemistry only, 13 waterbodies with an integrated analysis, and overlap in 6 waterbodies or 25% of 24 total segments).

A chemical cause of impairment based on the water chemistry-only data that is not listed as a predominant cause by the integrated assessment could be the result of: (1) the duration and severity of the chemical impairment was deemed insufficient to result in the observed biological impairment, (2) site specific variation in the toxicity of the chemical (e.g., antagonistic influences acting on the toxic component), or (3) responses of the biota that indicate the chemical violation is having little or no effect instream or the response is not predominantly related to the chemical.

Water Chemistry Including Nutrients

The addition of three nutrients (total phosphorus, nitrate, TKN) to the water chemistry parameters discussed above improved the detection of aquatic life impaired waters. The agreement between the integrated analysis and chemical-only analysis (including nutrients) of aquatic life impairment in waterbodies is illustrated the bottom panel of in figure 1.

In situations where nutrients were included in the analysis (Figure 1, bottom panel) 36.4 % of the waterbodies were impaired or partially impaired as determined by the integrated analysis (i.e., biological impairment), but were not detected as impaired or partially impaired by the water chemistry data alone.

		Water Chemistry Only	
		Meeting	**Impaired**
Integrated	**Meeting**	9.3%	6.2%
Assessment	**Impaired**	36.4%	48.1%

This is a difference of 13.4% compared to the analysis without nutrients. In 9.3% of the waterbodies the integrated analysis and the water chemistry data agreed that there was no impairment. There were 6.2% of the segments that showed impairment of the water chemistry parameters without a corresponding biological impairment (a difference of 3.4% compared to the analysis without considering nutrients). In 48.1% of the waterbodies both the integrated analysis and the water chemistry analysis agreed that the aquatic life use was impaired or partially impaired, an additional 13.6% of the segments that were analyzed (i.e. this demonstrates an improvement of the power of the chemistry data to detect aquatic life

impairment).

In those segments where the biology was impaired, but where the chemistry data alone failed to detect an impairment the addition of nutrients into the chemistry data added 27% more of these waterbodies compared to the analysis without nutrients (see Figure 1). Figure 3 illustrates, that on a percentage basis, the greatest increase in segments where impairment was detected with the inclusion of nutrients was in those segments where only non-chemical causes were reported by the integrated analysis. The most frequent causes of impairment that were added when nutrients were included in the water chemistry data were non-chemical (siltation, flow alteration, habitat) and organic enrichment/dissolved oxygen (Table 5). The addition of nutrients also increased the agreement of "organic enrichment/dissolved oxygen" as a cause of impairment between the water chemistry and integrated analysis from 55% of 202 total segments to 75% of 307 segments. This data suggests that the inclusion of nutrients can coincidentally detect "non-chemical" causes of impact that are otherwise "missed" in a more narrow water chemistry-based analysis. These "coincidental" inclusions, however, are based in genuine relationships between nutrients and non-chemical impacts. In streams, phosphorus is regularly transported attached to silt and sediment particles and the co-occurrence of these impacts with siltation is logical. However, even with this increase in the detection of impairment by including nutrients, 36.4% of the segments are still be incorrectly classified as attaining their aquatic life uses when they are actually impaired by a wide range of non chemical and chemical factors (Figure 3).

Response of Fish and Macroinvertebrate Communities to Water Column Chemical Parameters

Site-Specific Data

Figure 5a-e illustrate the response of the IBI and ICI at sites with an increasing severity of chemical exceedances based on ambient grab samples in Ohio streams for 16 commonly measured parameters. Extreme or major exceedances of some parameters do not preclude good or even exceptional biological communities. For instance with TKN and total dissolved solids there are very good or exceptional biological communities (i.e., IBI, ICI $\geq$ 50) at sites with major and extreme chemical exceedances levels. For other parameters, however, such as unionized ammonia and pH, there are *no* very good or exceptional biological communities at major and extreme exceedance concentration levels and few such sites with even minor or moderate exceedances.

This variation has important implications for the interpretation of chemical monitoring results. For instance, two similar waterbodies with the same "miles impaired" by <u>different</u> parameters can have vastly different biological responses, especially with respect to the severity of impairment. Figures 5a-e can be used to better interpret the *severity* of impacts related to exceedances of the chemical criteria. Similarly for parameters without existing aquatic life criteria (e.g., phosphorus, TKN), these figures can be used to interpret

biological community response associated with the observed ambient instream concentration of the parameter. For example, major and extreme exceedance levels of BOD are characteristic of streams with fair to very poor IBI scores, but minor and moderate exceedance levels of BOD are frequently found in streams with very good or exceptional IBI scores.

Discussion

We suggest that there can be a wide variation in estimates of miles of streams that have aquatic life impairment as well as in the causes attributed to impairment depending on the type and integration of data used in surface water assessment. Here we have presented the extremes in the types of ambient data used in aquatic life use attainment analyses in Ohio: an intensive survey database of biological, chemical (multiple media), and physical components compared to simple water column chemistry data. Implicit in this approach is the incorporation of experienced scientific judgement and reliable source data which undoubtedly improves its accuracy. This analysis suggests that over-reliance on a simple water chemistry approach seriously underestimates the extent of impairment in a state's waters and provides a potentially biased view of the important causes of impairment. The possible reasons for these biases are summarized in Table 6.

For sites sampled with limited monitoring data (e.g., water chemistry alone) much uncertainty could remain regarding the causes of impairment. In the past, when violations of chemical criteria were gross and frequent, chemical surrogates were often sufficient to categorize the major instream problems. As surface waters have improved from the grossly polluted conditions of the 1960's and 1970's water chemistry data alone is less able to accurately distinguish among the remaining, comparatively more subtle impacts. The failure to use an integrated approach may result in an inaccurate classification of the causes of non-attainment and result in incomplete solutions to the problems affecting the water resource. This will become especially critical as agencies deal with episodic pollution, nonpoint pollution, and habitat impacts.

There is a distinct conceptual difference between biological and chemical data in relation to assessing the attainment status of aquatic life uses. Biological community indices are a direct assessment of aquatic community health and well-being while, in contrast, chemical specific measures are surrogates or indirect measures. Direct assessments can detect both attainment and non-attainment of an aquatic life use. Surrogate methods, as we have demonstrated, can reliably indicate only non-attainment of an aquatic life use. The possibility of a parameter not measured being exceeded, of physical (habitat) degradation, of temporal impacts, or of biological impacts precludes a truly definitive statement about aquatic life use attainment using chemical criteria only.

Other problems in the estimation of surface water impairments arises from a

misunderstanding of the ways that chemical parameters in streams affect biological communities. Most of the parameters that have associated numerical water quality criteria for protecting aquatic life have arisen from studies on the direct toxic response (both acute and chronic) of chemicals on individual test species or organisms. For "nutrient" parameters most organisms show little "toxic" response even at extremely elevated levels. The real impacts of nutrients are diffuse and are "exclusionary" rather than toxic; species are "excluded" because they cannot function within the altered energy base, cannot reproduce successfully, or cannot exist within an altered dissolved oxygen regime. These parameters affect the trophic dynamics in streams and rivers and their effects can be exacerbated by physical factors such as sunlight, habitat, land use, soils, and drainage patterns. The failure to consider the effects of non-toxic environmental influences in a regional framework (e.g., Omnernik's ecoregions or their sub-components) has led to an incomplete understanding of the effects on nutrients on biological communities. Data from the site specific analysis suggests that exceedances of chemical criteria instream can be interpreted *biologically* and *probablistically*, an alternative to the violation/no violation approach of chemical criteria that is so often used.

Data in the 1988 National Water Quality Inventory[6] (1990) indicates that ambient chemistry data is widely used to determine aquatic life use attainment status. Their methods of tracking data used in state assessments, however, precludes the separation of simple from more integrated methods. An assessment of the "rigor" of the data used in such use attainment summaries can be gained by the fact that 29 states or territories out of 36 (for which data was available) use source data, predictive methods, or best professional judgement without any ambient data to assess aquatic life use attainment. In fact a majority of all assessed miles in the National Water Quality Inventory assessment of streams and rivers was made without ambient sampling data (US EPA 1990). To our knowledge, the accuracy of such information has not been tested against an integrated set of ambient data in relationship to assessing aquatic life use attainment.

Our personal experience suggests that ambient chemical data alone is probably more accurate than source data alone. The extent of incorrect classification of aquatic life use attainment status by relying on source-level data is unknown. This bias may, however, approach or even exceed the extent of error of a simple chemistry only approach. Best professional "scientific" judgement (i.e., "experience") and source data are critical elements in interpreting complex environmental impacts in streams and rivers. Alone, they are insufficient without incorporating ambient monitoring data. Further, ambient monitoring efforts should be broad (biological, chemical, and physical data),biologically based, and integrated to accurately asess aquatic life impacts.

---

[6]A national summary of water resource quality based on the compilation of data from the states and territories that submitted 1988 305(b) reports.

References

Fausch, K. D., J. R. Karr, and P. R. Yant. 1984. Regional application of an index of biotic integrity based on stream fish communities. Transactions of the American Fishery Society 113:39-55.

Karr, J.R. and D.R. Dudley. 1981. Ecological perspective on water quality goals. Environmental Management 5(1): 55-68.

Karr, J. R., K. D. Fausch, P. L. Angermeier. P. R. Yant, and I. J. Schlosser. 1986. Assessing biological integrity in running waters: A method and its rationale. Illinois Natual History Survey Special Publication No. 5, 28 pp. Champaign, Illinois

Ohio Environmental Protection Agency. 1986. Water Quality Inventory - 1986 305(b) report. Volume I. Theresa G. Heitzman, editor. Division of Water Quality Monitoring and Assessment.

Ohio Environmental Protection Agency. 1987a. Biological criteria for the protection of aquatic life: Volume I. The role of biological data in water quality assessment. Division of Water Quality Monitoring and Assessment, Surface Water Section, Columbus, Ohio.

Ohio Environmental Protection Agency. 1987b. Biological criteria for the protection of aquatic life: Volume II. Users manual for biological field assessment of Ohio surface waters. Division of Water Quality Monitoring and Assessment, Surface Water Section, Columbus, Ohio.

Ohio Environmental Protection Agency. 1987c. Users manual for wasteload allocation. Division of Water Quality Monitoring and Assessment. Columbus, Ohio.

Ohio Environmental Protection Agency. 1988a. Water Quality Inventory - 1988 305(b) report. Volume I. Edward T. Rankin, editor. Division of Water Quality Monitoring and Assessment.

Ohio Environmental Protection Agency. 1989a. Biological criteria for the protection of aquatic life: Volume III. Standardized biological field sampling and laboratory methods for assessing fish and macroinvertebrate communities. Division of Water Quality Monitoring and Assessment, Columbus, Ohio.

Ohio Environmental Protection Agency. 1989b. Addendum to Biological criteria for the protection of aquatic life: Volume II. Users manual for biological field assessment of Ohio surface waters. Division of Water Quality Monitoring and Assessment, Surface Water Section, Columbus, Ohio.

Ohio Environmental Protection Agency. 1990a. Water Resource Inventory - Executive Summary: Volume I 1990 305(b) report. Edward T. Rankin, Chris Yoder, and Dennis Mishne. Division of Water Quality Planning and Assessment.

Ohio Environmental Protection Agency. 1990b. Water Resource Inventory - Waterbody Segment Summaries: Volume II 1990 305(b) report. Edward T. Rankin. Division of Water Quality Planning and Assessment.

U. S. EPA. 1989. Guidelines for the preparation of the 1990 state water quality assessment (305(b) report). Office of Water, U.S.EPA, Washington D.C.

Yoder, C. O. 1989. The development and use of biocrteria for Ohio surface waters. In: Gretchin H. Flock, Water Quality Standards for the 21st Century, U. S.EPA, Office of Water

Table 1 Criteria for determining use attainment based on biological data.

Non-Attainment

A] *Neither ICI, IBI, nor Iwb meet criteria for ecoregion.*

OR

B] *One organism group indicates a severe toxic impact (poor or very poor categories) even if tthe other indicates criteria attainment.*

Partial Attainment

A] *One or Two Indices do not meet ecoregion criteria (if the two indices that do not meet do not suggest severe toxic impact i.e., both are in the fair range)*

Full Attainment

A] *All indices meet ecoregion criteria.*

Table 2. Criteria for determining use impairment based on instream chemical data. Levels of significance represent varying degrees of exceedance of chemical criteria.

Non Attainment

Extreme- Level 1 - Inside mixing zone chemical criteria is exceeded by the 10th percentile of instream values.

Extreme Level 2 - Inside mixing zone chemical criteria is exceeded by the 50th percentile (Median) of instream values.

Extreme Level 3 - Inside mixing zone chemical criteria is exceeded by the 90th percentile of instream values.

Major- Level 1 - Maximum outside mixing zone chemical criteria is exceeded by the 10th percentile of instream values.

Major- Level 2 - Maximum outside mixing zone chemical criteria is exceeded by the 50th percentile (Median) of instream values.

Major- Level 3 - Maximum outside mixing zone chemical criteria is exceeded by the 90th percentile of instream values.

Moderate exceedence - Chronic (Average) chemical criteria exceeded by 25th percentile of instream values and the mean is less than the criteria OR Chronic (Average) chemical criteria exceeded by 10th percentile of instream values and the mean is greater than the criteria.

Partial Attainment

Minor exceedance - Chronic (Average) chemical criteria exceeded by 10th percentile of instream values and the mean is less than the criteria OR Chronic (Average) chemical criteria is not exceeded by the 10th percentile of instream values and the mean is greater than the criteria.

Full Attainment

No - Chronic (Average) chemical criteria is not exceeded by the 10th percentile of instream values and the mean is less than the criteria.

Table 3. Categories of deviation from relatively unimpacted reference sites for parameters without aquatic life use water quality criteria

		Reference Values				
Effect Level	Sample Data	Median	Upper Quartile	2*Q.D.[1] + Median	5*Q.D. + Median	10*Q.D. + Median
None-1	Mean	<				
	90th %tile	<				
None-2	Mean	>	<			
	90th %tile	<	<			
	OR					
	Mean	<				
	90th %tile	>				
None-3	Mean	>	<			
	90th %tile	>	<			
None-4	Mean		<	<		
	90th %tile		>	<		
	OR					
	Mean		>	<		
	90th %tile		<	<		
Minor-5	Mean		>	<		
	90th %tile		>	<		
Minor-6	Mean			>	<	
	90th %tile			<	<	
	OR					
	Mean			<	<	
	90th %tile			>	<	
Moderate-7	Mean			>	<	
	90th %tile			>	<	
Moderate-8	Mean				>	<
	90th %tile				<	<
	OR					
	Mean				<	<
	90th %tile				>	<
Major-9	Mean				>	<
	90th %tile				>	<
Major-10	Mean					>
	90th %tile					>

[1]Q.D. (Quartile Difference) =[Upper Quartile (75th percentile) – Median]

Table 4. Concentrations of nutrients (total phosphorus, total kjedahl nitrogen, nitrate) used to indicate increasing severity of mine affected waters compared to relatively unimpacted reference sites.

Parameter	Median	75th %tile[UQ]	2*(UQ-Med.) .+ Median	5*(UQ-Med.) .+ Median	10*(UQ-Med.) .+ Median
		Huron Erie Lake Plain Ecoregion			
Total Phosphorus (mg/l)	0.195	0.29	0.34	0.67	1.15
Nitrate (mg/l)	1.430	2.81	4.19	8.33	15.23
TKN (mg/l)	0.965	1.21	1.46	2.19	3.42
		Interior Plateau Ecoregion			
Total Phosphorus (mg/l)	0.130	0.16	0.19	0.28	0.43
Nitrate (mg/l)	0.660	1.79	2.92	6.31	11.96
TKN (mg/l)	0.650	0.75	0.85	1.15	1.65
		Erie Ontario Lake Plain Ecoregion			
Total Phosphorus (mg/l)	0.070	0.15	0.23	0.47	0.87
Nitrate (mg/l)	0.660	1.33	2.00	4.01	7.36
TKN (mg/l)	0.540	0.76	0.98	1.64	2.74
		Western Allegheny Plateau Ecoregion (< 800 sq mi)			
Total Phosphorus (mg/l)	0.050	0.11	0.17	0.35	0.65
Nitrate (mg/l)	0.540	0.86	1.18	2.14	3.74
TKN (mg/l)	0.330	0.44	0.55	0.88	1.43
		Western Allegheny Plateau Ecoregion(> 800 sq mi)			
Total Phosphorus (mg/l)	0.190	0.25	0.31	0.49	0.79
Nitrate (mg/l)	1.730	2.01	2.29	3.13	4.53
TKN (mg/l)	0.880	0.91	0.94	1.03	1.18
		East Corn Belt Plain Ecoregion(< 800 sq mi)			
Total Phosphorus (mg/l)	0.105	0.19	0.28	0.53	0.96
Nitrate (mg/l)	1.330	2.43	3.53	6.83	12.33
TKN (mg/l)	0.64	0.83	1.02	1.59	2.54
		East Corn Belt Plain Ecoregion(> 800 sq mi)			
Total Phosphorus (mg/l)	0.435	0.59	0.75	1.21	1.99
Nitrate (mg/l)	2.660	3.03	3.40	4.51	6.36
TKN (mg/l)	1.320	1.48	1.64	2.12	2.92

Table 5. Causes of impairment based on an integrated analysis (number of waterbodies and percent increase) in waterbody segments when elevated nutrients are included in the chemical only analysis of impairment (for causes noted as important in at least 25 waterbodies)

	Integrated Analysis			
Impairment Cause	With Nutrients	Without Nutrients	Difference	% Increase
Siltation	90	60	30	% 50
Flow Alteration	40	30	10	% 33
Organic Enrichment/D.O.	247	185	62	% 33
Habitat	90	69	21	% 30
Metals	100	85	15	% 18
Ammonia	91	81	10	% 12

Table 6. Some possible explanations for agreement and disagreement between biosurvey and chemical surrogate methods of assessing aquatic life use attainment.

Situation 1. Biological data indicates non-attainment of aquatic life use but chemical surrogates show no exceedances of water quality standards

Possible Causes:

1. Physical problems causing non-attainment (e.g., habitat degradation).
2. Chemicals other than ones sampled responsible for degradation.
3. Temporal impacts not detected by chemical sampling.
4. Non-toxic impacts that cause shifts in community function (e.g., nutrient enrichment).
5. Chemical Water Quality Criteria are not protective enough.
6. Biological factors impact the resource (e.g., introduction of exotic species).

Situation 2. Biological data indicates attainment, but chemical surrogates suggestion-attainment of aquatic life use

Possible Causes:

1. Duration and frequency of chemical criteria exceedance is not sufficient to cause a biological impairment.
2. Chemical criteria are overprotective of the aquatic life use.
3. Measurement technique for the chemical that shows exceedance is not indicative of actual toxicity to aquatic life (e.g., total metals measured, but criterion was based on studies of the effects of dissolved metals on aquatic life).
4. Site specific variation in toxicity to parameters in exceedance.

Situation 3. Biological data and chemical surrogates indicate non-attainment of aquatic life use

Possible Causes:

1. Chemical data accurately portrays extent of instream impairment.
2. Chemical data accurately portrays part of problem instream but fails to detect problems of importance (see situation 1).
3. Chemical data shows exceedance of aquatic life criteria but overestimates the influence of the parameter(s) in relation to the actual factors responsible for non-attainment of the aquatic life use.

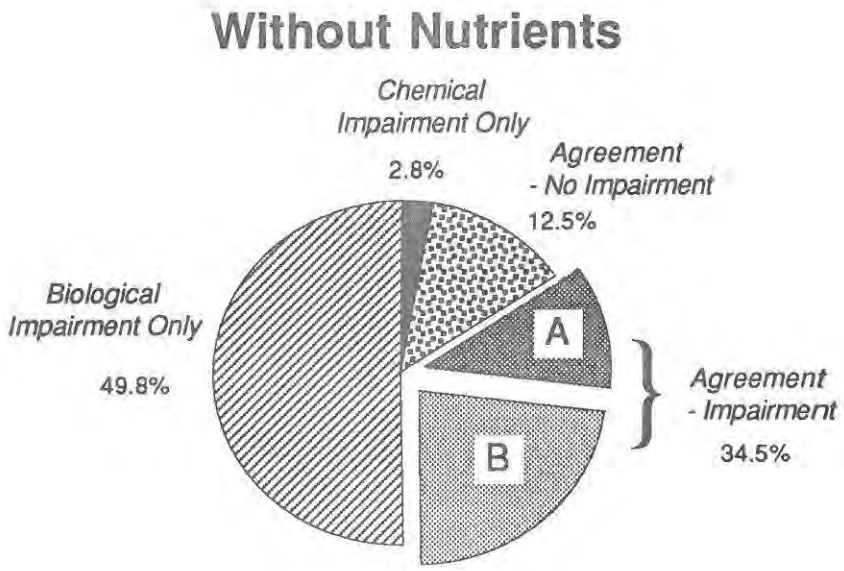
Figure 1. Percent of Ohio waterbodies that show agreement or disagreement in the assessment of aquatic life attainment on the basis of integrated environmental data (biological, chemical, and physical data) compared to an assessment based on water column chemistry alone. Portions of the graph are those waterbodies where both methods found water chemical impacts alone impairing aquatic life; portions of the graphs are those waterbodies that had chemical impacts on the basis of water chemistry data alone, but had other causes of impact exclusively or in addition to water chemistry impacts on the basis of the the integrated assessment.

Figure 2. Types of impacts in waterbodies as determined by the water chemistry data alone without nutrient data (open bars), the integrated assessment alone (solid bars), or both analyses (shaded bars) where the assessment types agree or disagreed on aquatic life use attainment.

Figure 3. Types of impacts in waterbodies as determined by the water chemistry data alone with nutrient data (open bars), the integrated assessment alone (solid bars), or both analyses (shaded bars) where the assessment types agree or disagreed on aquatic life use attainment.

Figure 4. Categories of impact (chemical, toxics, non-chemical) from the integrated assessment in impaired waterbodies where the water chemistry analysis and the integrated assessment *agree* on the aquatic life attainment status.

Figure 5. (See graph).


Without Nutrients
Chemical Impairment Only
2.8%
Agreement - No Impairment
12.5%
Biological Impairment Only
49.8%
A
B
Agreement - Impairment
34.5%

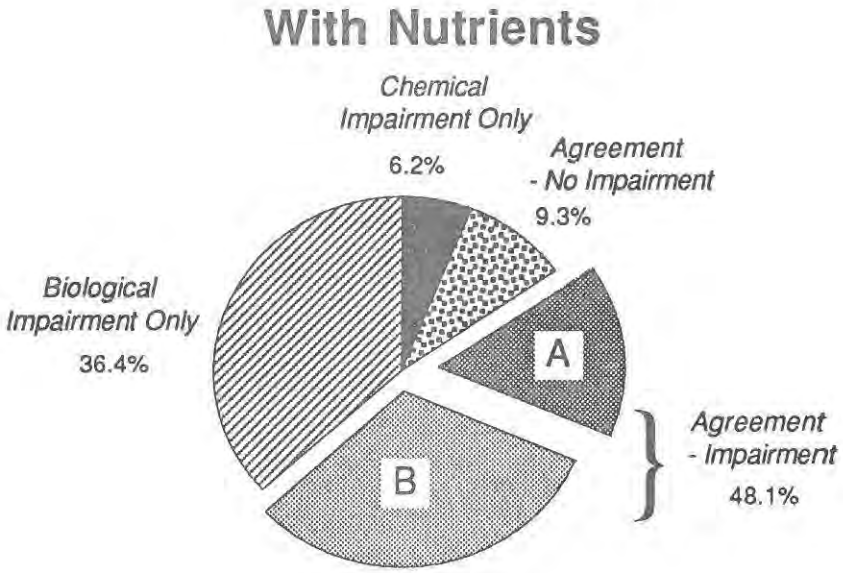
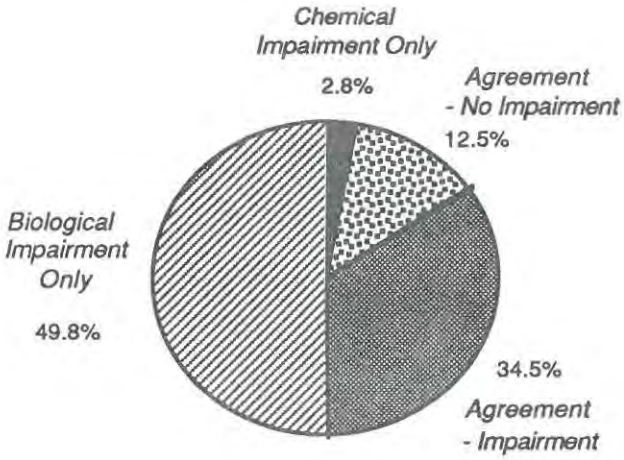
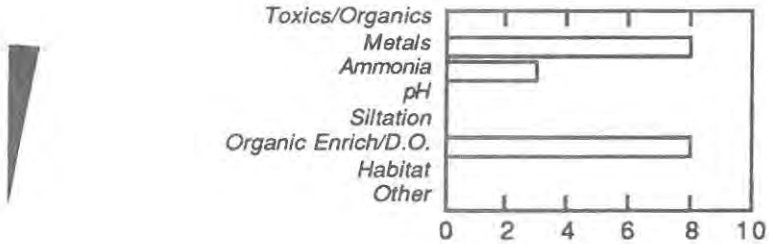
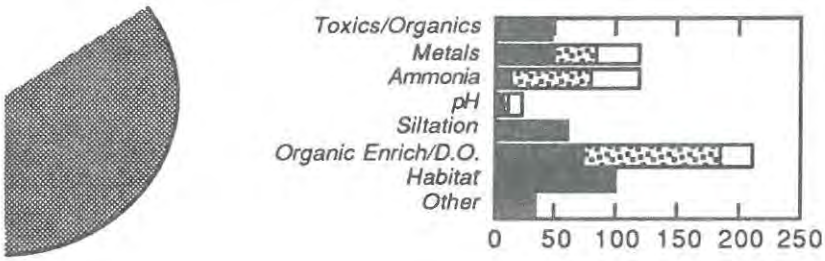

With Nutrients
Chemical Impairment Only
6.2%
Agreement - No Impairment
9.3%
Biological Impairment Only
36.4%
A
B
Agreement - Impairment
48.1%

Figure 1.

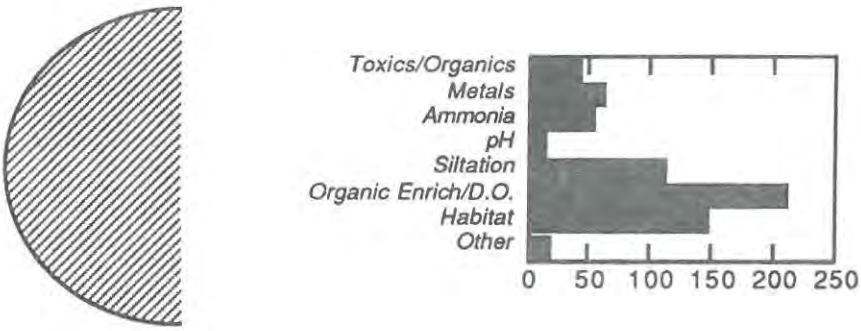




Chemical Impairment Only

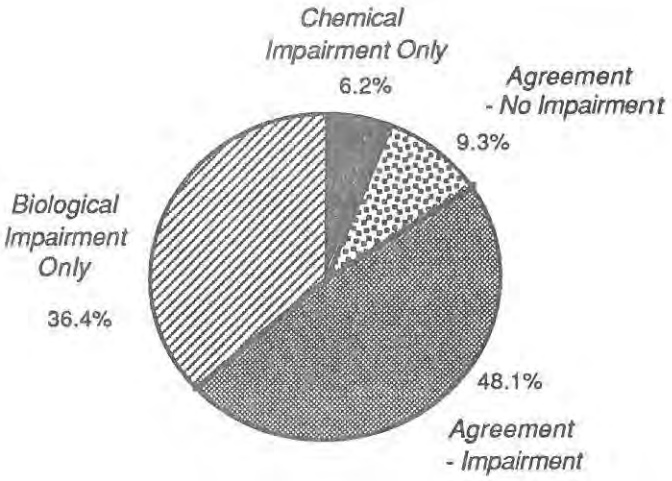


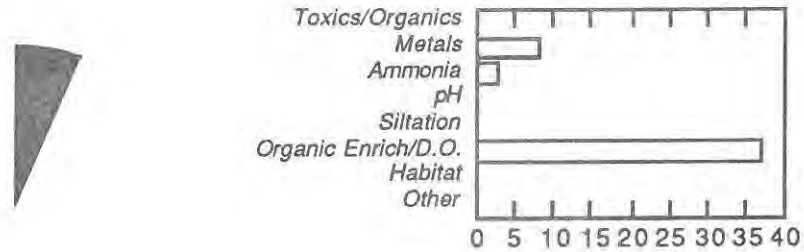
Agreement: Impairment



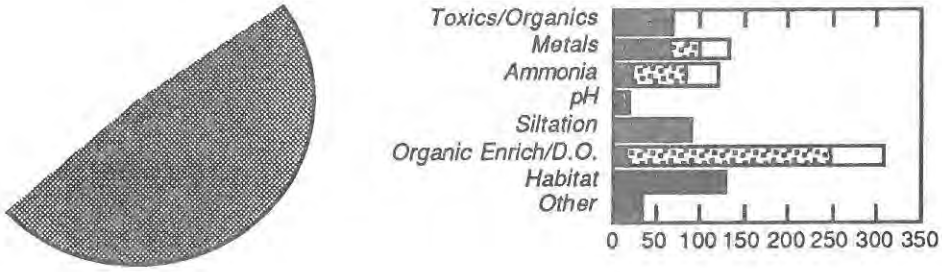
Biological Impairment Only

Figure 2.

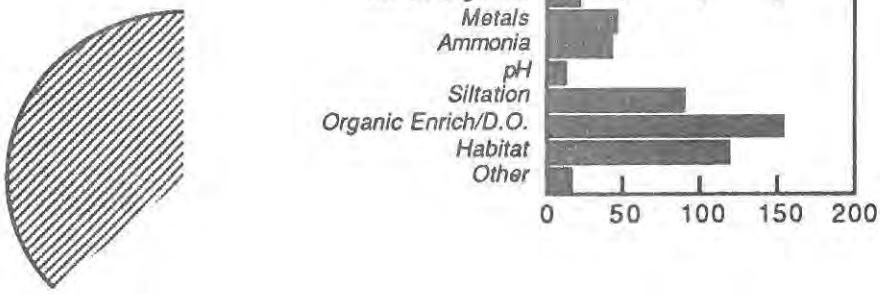




Chemical Impairment Only

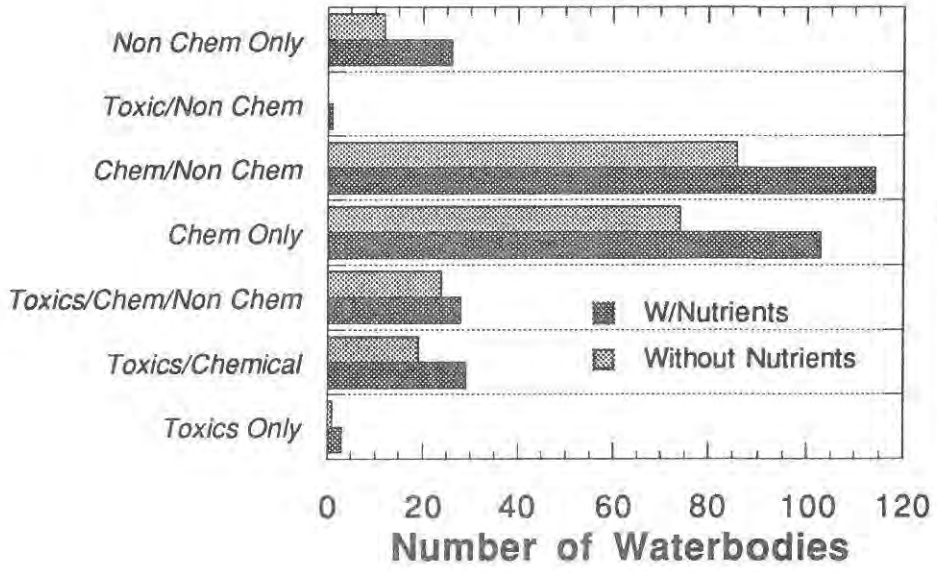


Agreement: Impairment



Biological Impairment Only

Figure 3


Non Chem Only
Toxic/Non Chem
Chem/Non Chem
Chem Only
Toxics/Chem/Non Chem
Toxics/Chemical
Toxics Only
W/Nutrients
Without Nutrients
0
20
40
60
80
100
120
Number of Waterbodies

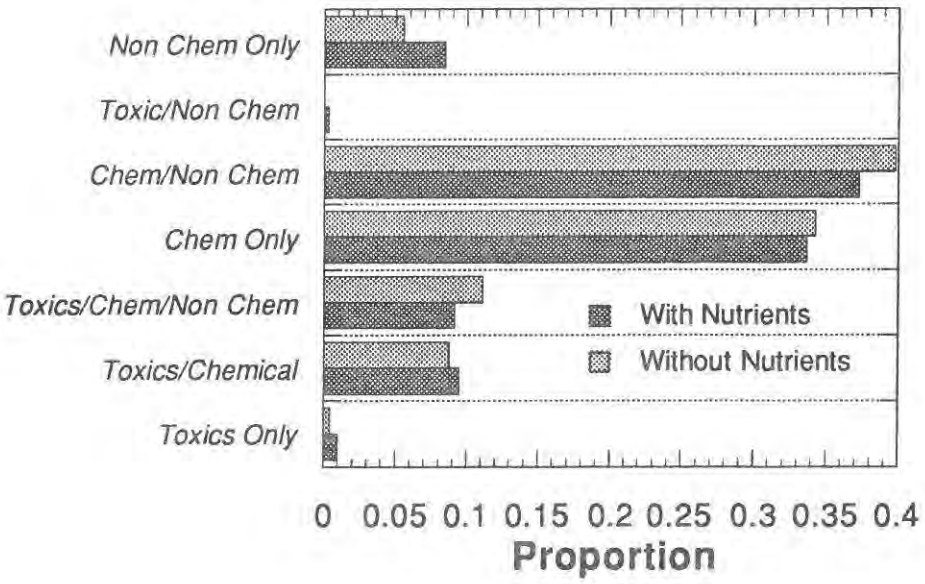

Non Chem Only
Toxic/Non Chem
Chem/Non Chem
Chem Only
Toxics/Chem/Non Chem
Toxics/Chemical
Toxics Only
With Nutrients
Without Nutrients
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
Proportion

Figure 4

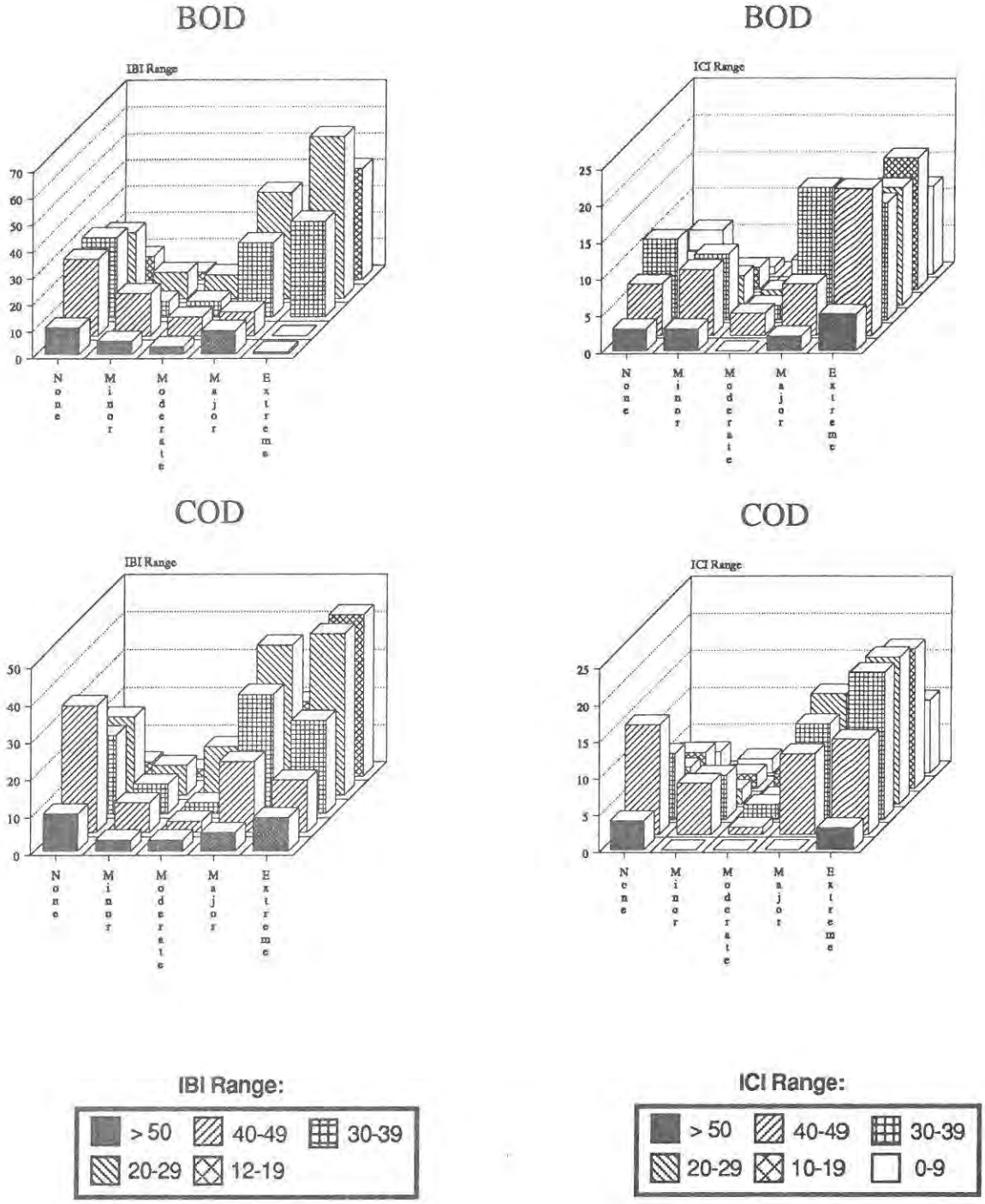
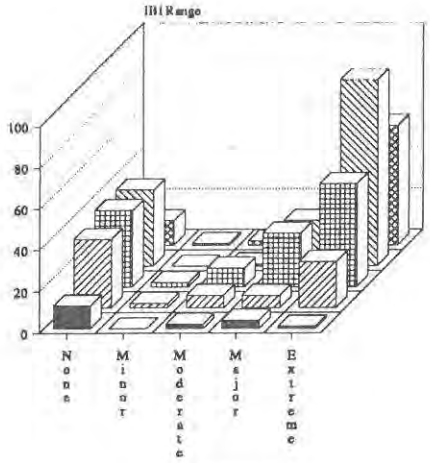


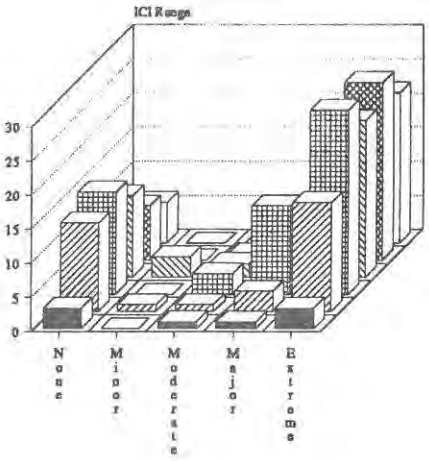
Figure 5 Three dimensional histograms of frequencies (Y-axis) of stream sampling locations that show no, minor, moderate, major, or extreme "exceedances" of chemical criteria or "levels of concern" (X-axis) versus ranges of the IBI or ICI scores (Z-axis, see key) at these locations. The "None" category of chemical exceedance was multiplied by 0.1 for copper, zinc, un-ionized ammonia, and pH to improve the resolution of the less frequent exceedance categories.

Figure 5 Continued.

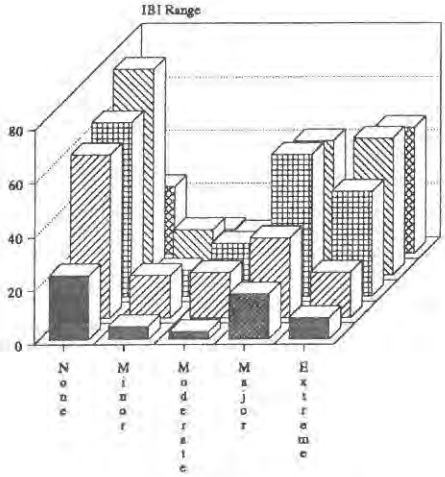
Nitrite



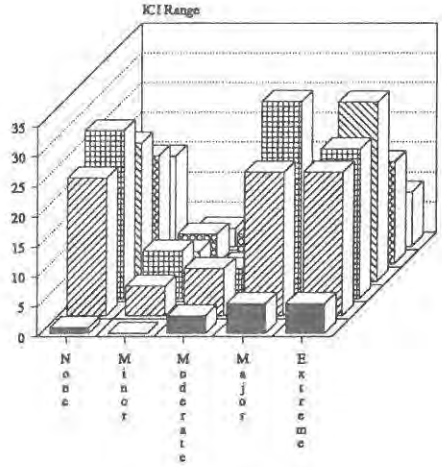
Nitrite



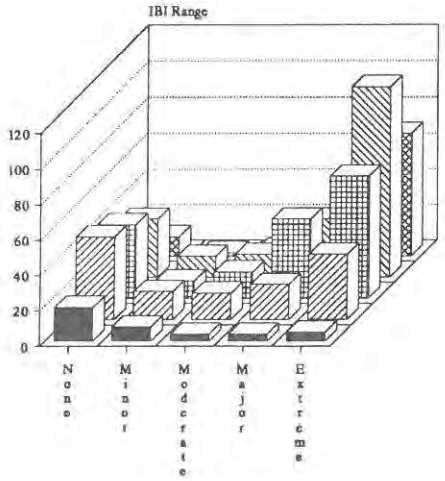
Nitrate



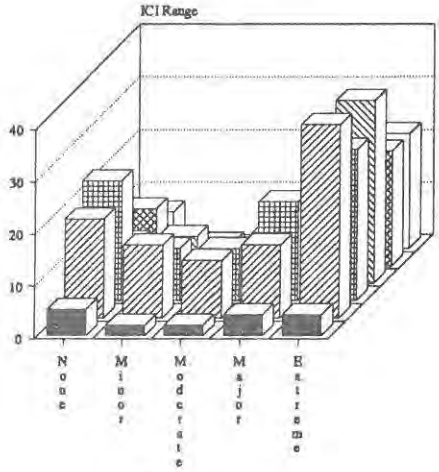
Nitrate



Phosphorus



Phosphorus



IBI Range:

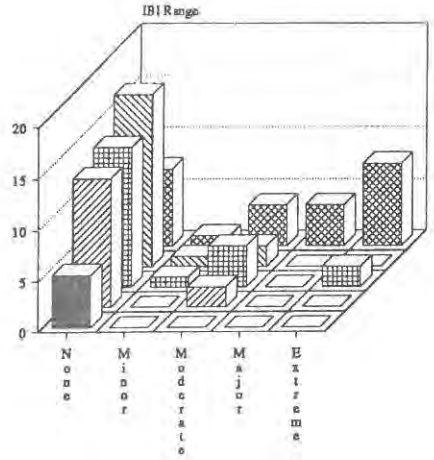
> 50	40-49	30-39
20-29	12-19	

ICI Range:

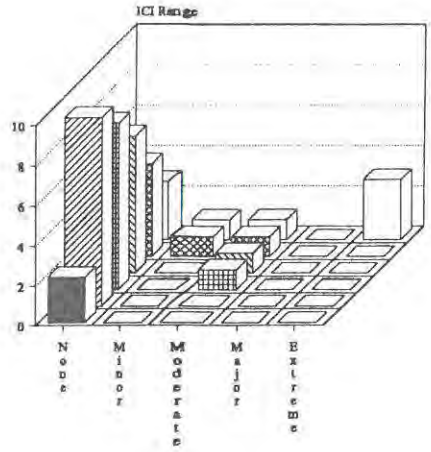
> 50	40-49	30-39
20-29	10-19	0-9

Figure 5 Continued.

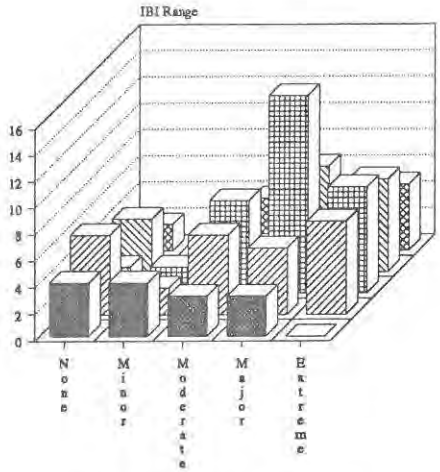
pH



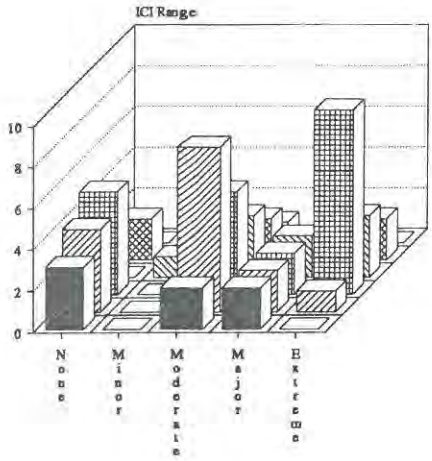
pH



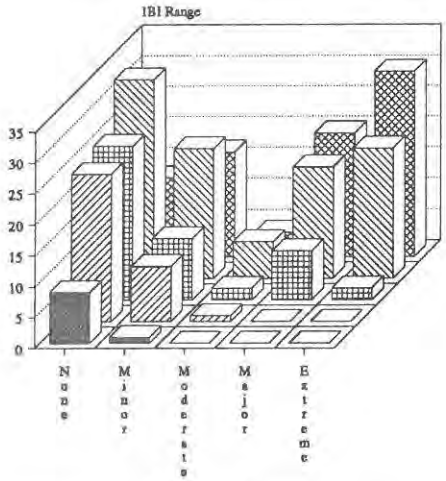
Sulfate



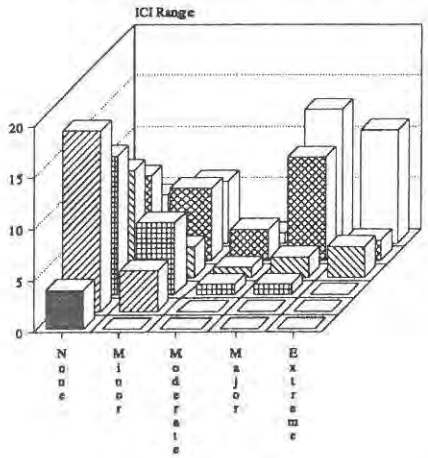
Sulfate



Un-ionized Ammonia



Un-ionized Ammonia



IBI Range:

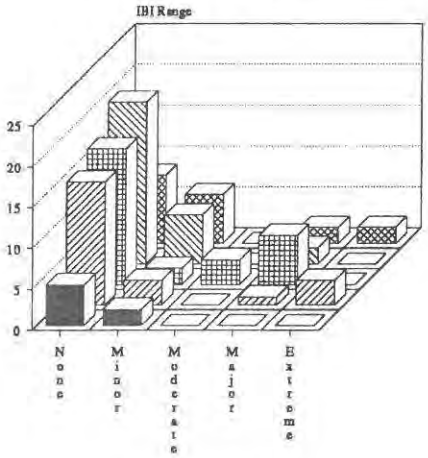
> 50 | 40-49 | 30-39
20-29 | 12-19

ICI Range:

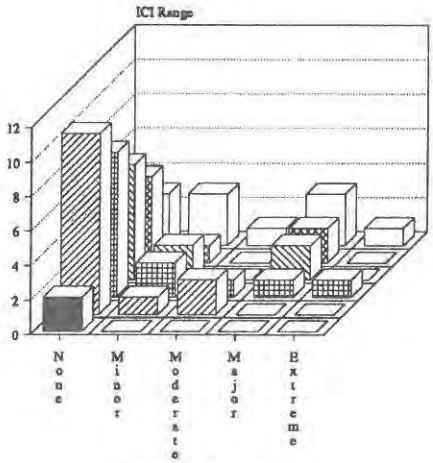
> 50 | 40-49 | 30-39
20-29 | 10-19 | 0-9

Figure 5 Continued.

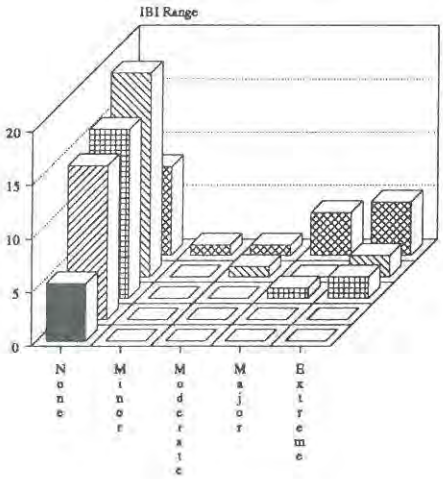
Total Copper



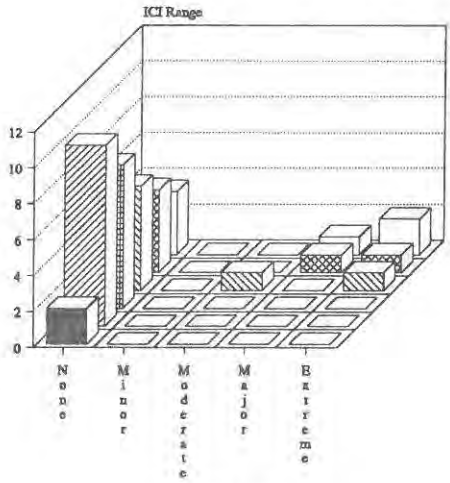
Total Copper



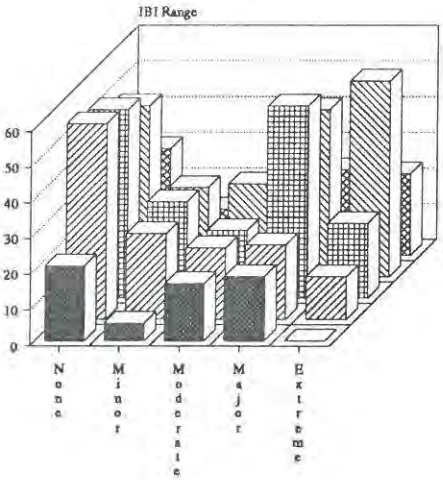
Total Zinc



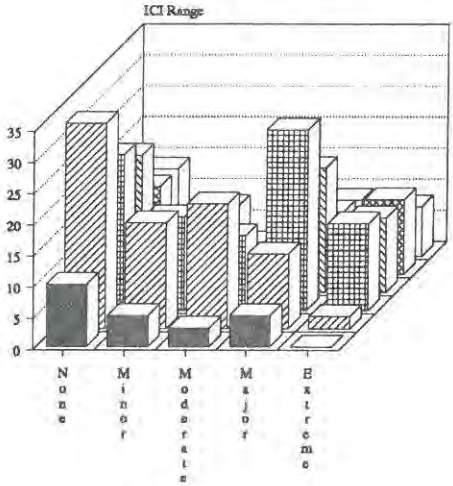
Total Zinc



Hardness



Hardness



IBI Range:

> 50	40-49	30-39
20-29	12-19	

ICI Range:

> 50	40-49	30-39
20-29	10-19	0-9

Figure 5 Continued.

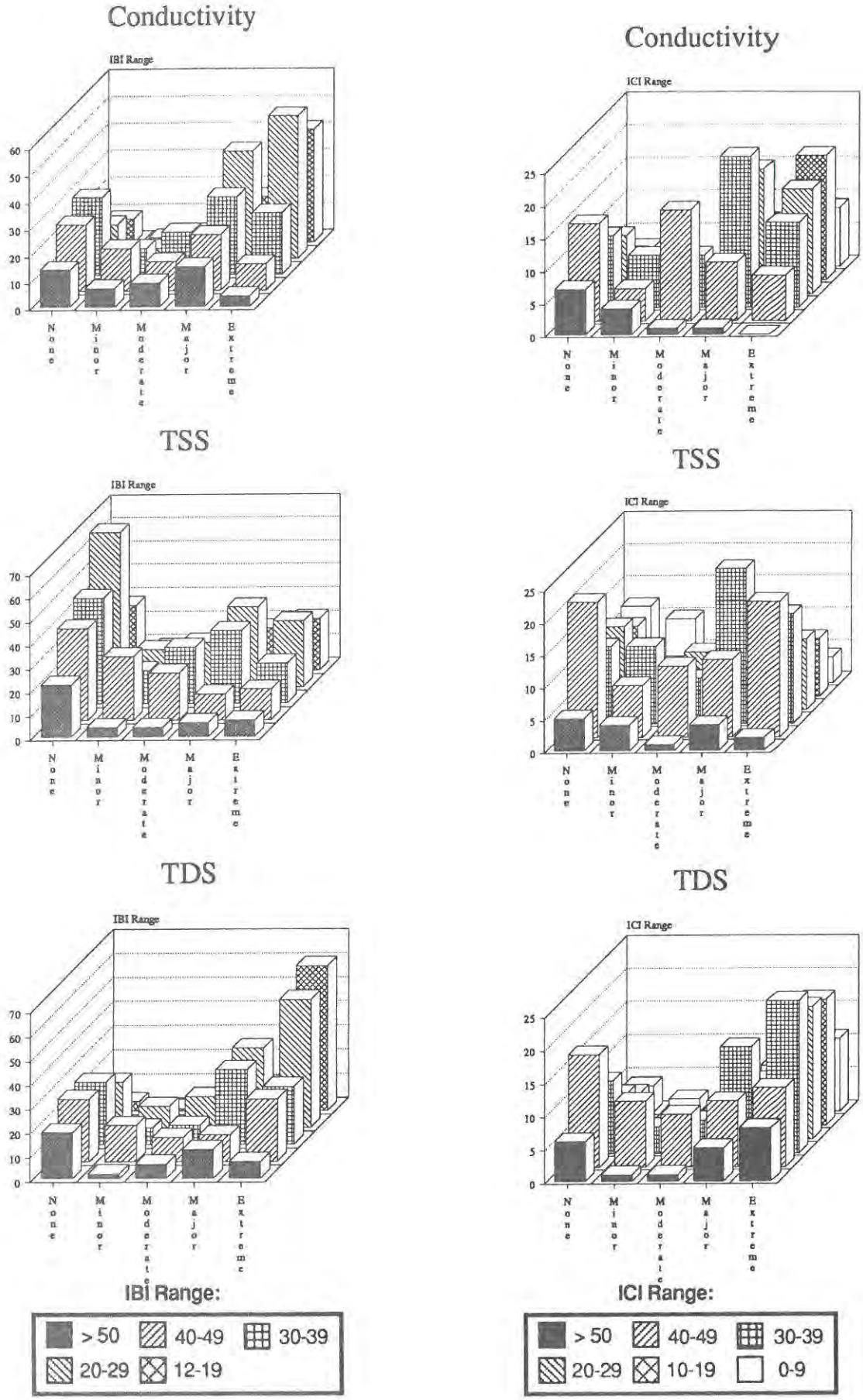
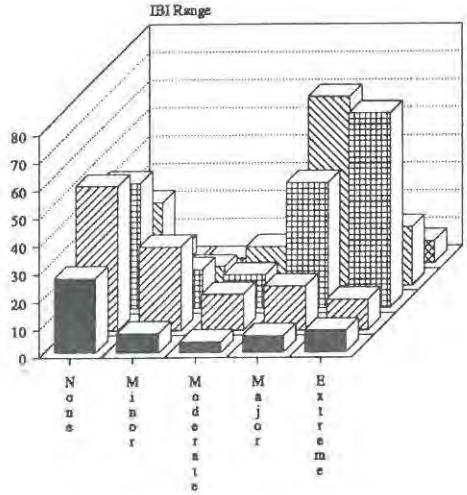
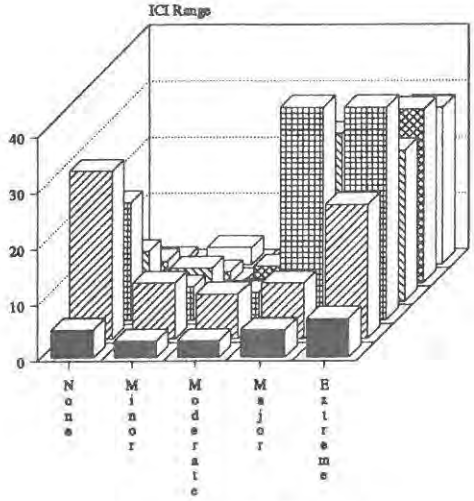


Figure 5 Continued.

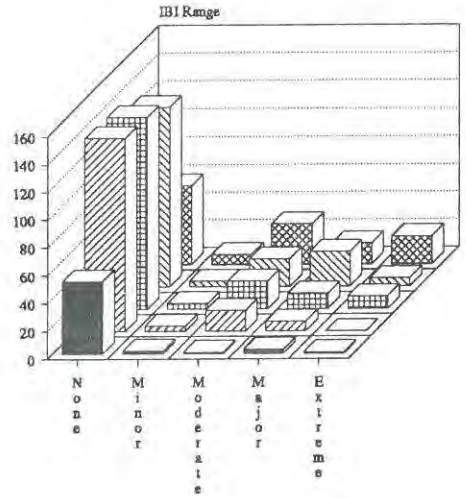
TKN



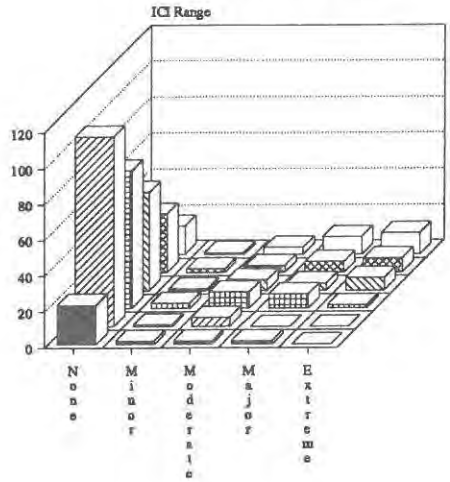
TKN



Dissolved Oxygen



Dissolved Oxygen



IBI Range:

> 50	40-49	30-39
20-29	12-19	

ICI Range:

> 50	40-49	30-39
20-29	10-19	0-9

Comparison of Bioassay Results With Instream Biological Community Performance: A Preliminary Analysis

Appendix J

Ohio Water Resource Inventory (Vol 1)

Fri, Jun 15, 1990

Chris O. Yoder
Ecological Assessment Section
Division of Water Quality Planning & Assessment

Charles D.Webster
Bioassay Section
Division of Environmental Services

Ohio EPA
1030 King Avenue
Columbus, Ohio 43212

Introduction

A comparison of the results of acute bioassays conducted for 43 entities and the results of instream biological assessments (*i.e.* biosurveys) in the receiving waters was made. This is a general comparison of the level of "agreement" between the two different evaluations. Agreement can occur two ways: 1) both the bioassay and biosurvey results indicate an impairment, the character of the latter being predominantly toxic, and 2) neither assessment shows impairment, or any biosurvey impairment instream is not of a predominantly toxic character. The results are from the 1987-1989 period.

Methods

Bioassay results were obtained from standard 48 hour screening and 96 hour definitive tests using *Ceriodaphnia* and fathead minnows (*Pimephales promelas*) per Ohio EPA methods (Ohio EPA 1989a). Biosurvey results were from Ohio EPA biological and water quality surveys which employ standard field methods and data analysis procedures (Ohio EPA 1987, 1989b,c). Biocriteria calibrated via the regional reference site approach were used and included both fish (Index of Biotic Integrity, IBI; Modified Index of Well-Being, MIwb) and macroinvertebrates (Invertebrate Community Index, ICI). The level of agreement between bioassay and biosurvey results was designated as ***Good***, ***Fair***, or ***None***. The timing of the bioassay and biosurvey sampling may not have been exact, which might be construed as a sub-optimal study design. However, the regulatory implications of finding toxicity in one or a few bioassays assumes that the problem exists over time. Hence this assumption and its influence on how bioassay results are used make sampling incompatibility less of a problem here.

Bioassay test results were arranged in three categories as: 1) acute toxicity (defined as 20% or greater mortality) in the *effluent only* among one or more tests, 2) acute toxicity in *both the effluent and mixing zone*, and 3) *no acute toxicity* (less than 20% mortality) in any test. The level of agreement with biosurvey results was then evaluated for each of these three categories. Biosurvey data was evaluated on the basis of results obtained in the immediate mixing zone, immediately downstream, and the upstream/downstream longitudinal profile of the IBI, MIwb, and ICI. Knowledge of overlapping impacts and other sources and influences were also evaluated for each receiving stream or river. All of the areas included in this analysis have been the subject of integrated chemical, physical, and biological surveys. The resultant analyses have been included in Water Quality Based Effluent Limit (WQBEL) reports prepared by the Division of Water Quality Planning and Assessment. WQBEL reports provide the technical basis for limitations and conditions of NPDES permits issued by the Division of Water Pollution Control.

General criteria for determining the level of agreement between the bioassay and biosurvey results are as follows:

1) ***Good***: Bioassay results and instream community response had a strong agreement. Bioassay results indicating acute toxicity were correlated with biosurvey results that were strongly indicative of toxicity; or, no bioassay toxicity was evident and the instream results did not indicate a strong response to toxicity.

2) ***Fair***: Agreement was not strong, but an effect from toxicity could not be ruled out. In such situations the bioassay results indicated toxicity, but the instream response pattern indicated something other than acute toxicity as the *predominant* impact. Instances with impairment in the instream community that were not strongly indicative of toxicity, but where acute toxicity was found in the effluent or mixing zone, were usually placed in this category.

3) ***None***: This was applied when the instream response was characteristically non-toxic, even though some toxicity may have been apparent in the bioassay results. The coincidental occurrence of acute toxicity and instream impairment *alone* was not sufficient reason to rate the agreement as ***Good*** or **Fair.**

Instream community response patterns have recently been developed by Ohio EPA and were used in the evaluation of the biosurvey results. The relative inability of biosurvey data *alone* to reveal anything about what causes or sources might be contributing to an impaired condition has been a problem in the past. However, new generation indices such as the IBI and ICI allow for an examination of an array of multiple community metrics and parameters, the combinant patterns of which show consistent responses to general types of impacts (see ***Biological Response Signatures,*** pages 35-41). However, even with this information and knowledge, some of the comparisons were not entirely conclusive. In such cases, we deferred to the toxicity test results of the in determining the level of agreement.

The overall results of the comparison show ***Good*** agreement in 16 of the 43 comparisons, ***Fair*** agreement in 14 cases, and ***None*** in the remaining 13 comparisons (Table 1; Fig. 1). The level of agreement was lowest for the effluent only scenario, followed by the effluent/mixing zone category. The no toxicity scenario had a 90% ***Good*** level of agreement (Table 1; Fig. 1). The near complete agreement of the biosurvey results with the no toxicity category combined with the incomplete agreement with the other two categories might lead to the perception that biosurvey results are not sufficiently sensitive to detect instream problems resulting from toxicity. This perception might prove true if the biosurvey results in this category showed attainment of the biocriteria. However, the majority of the biosurvey results in the no toxicity category showed significant impairment of the ecoregional derived biocriteria (Table 3; Fig. 2).

Table 1. The level of agreement between bioassay and biosurvey evaluations based on a comparison of 43 effluent and mixing zone acute toxicity tests and the response of the instream fish and macroinvertebrate communities downstream.

Toxicity Category	Level of Agreement *Good*	*Fair*	*None*
1. Acute Effluent Toxicity Only (n = 23)	4 (18%)	8 (35%)	11 (47%)
2. Acute Toxicity in Effluent and Mixing Zone (n = 10)	3 (30%)	5 (50%)	2 (20%)
3. No Toxicity (n = 10)	9 (90%)	1 (10%)	0 (0%)
Totals (n = 43)	16 (37%)	14 (33%)	13 (30%)

Table 2. Instream community performance as portrayed by five narrative classes compared to toxicity measures in the effluent and mixing zones of 43 discharges.

Toxicity Category	Instream Community Performance *Exceptional*	*Good*	*Fair*	*Poor*	*Very Poor*
1. Acute Effluent Toxicity Only (n = 23)	2	4	7	7	3
2. Acute Toxicity in Effluent and Mixing Zone (n = 10)	1	3	4	1	1
3. No Toxicity (n = 10)	3	2	2	2	1
Totals (n = 43)	6 (14%)	9 (21%)	13 (30%)	10 (23%)	5 (12%)

This indicates that impairment existed in the apparent absence of effluent or mixing zone toxicity, presumably due to some other source. In addition instream community performance varied widely within each of the three toxicity test categories (Table 2; Fig. 2) further demonstrating the sometimes "independent" response of the biota. Biological community performance is classified as exceptional, good, fair, poor, or very poor and is consistent with the biocriteria (Ohio EPA 1987b,c). For example, the exceptional and good levels of performance correspond to the Exceptional Warmwater Habitat (EWH) and Warmwater Habitat (WWH) use designations in the Ohio WQS. There was no consistent pattern of strong agreement with the presence of toxicity (or lack thereof) in an effluent with the resultant level of biological performance (e.g., low performance levels did not always occur with acute toxicity in the effluent or mixing zone). There was better, though not complete, agreement when the mixing zone was acutely toxic. A nearly equal number of biosurvey results indicated exceptional, good, fair, poor, or very poor results across the three toxicity test categories (Fig. 2). Another analysis shows the distribution of biological index scores by toxicity category for the IBI, ICI, and MIwb (Fig. 3). Again, no clear trend among the three categories was evident. Biological index scores showed approximately the same range and relative distribution between each of the three toxicity test categories.

Table 3. Instream aquatic life use impairment as measured by ambient biocriteria compared to the three toxicity categories for 43 discharges.

Toxicity Category	***Impaired***	***Not Impaired***
1. Acute Effluent Toxicity Only (n = 23)	13 (57%)	10 (43%
2. Acute Toxicity in Effluent and Mixing Zone (n = 10)	8 (80%)	2 (20%)
3. No Toxicity (n = 10)	7 (70%)	3 (30%)
Totals (n = 43)	28 (65%)	15 (35%)

The results of this analysis indicate that the presence or absence of acute toxicity in an effluent is not necessarily reflected by the instream communities. Agreement is better, however, where acute toxicity exists in the mixing zone. Other impacts often pre-empt and possibly mask the potential effects of toxicity observed in a bioassay. The frequency and duration of acute toxicity along with the mixing and dilution characteristics of the

receiving waters greatly influence how, of it, toxicity be eventually expressed in the instream community. These results should not be misconstrued to claim toxicity testing and monitoring is an invalid assessment and regulatory tool. Quite to the contrary, we have seen the instream biota respond strongly to toxic effluents where the severity, duration, and impact were sufficient to cause problems in the receiving waters. Used in combination, bioassay and biosurvey together make a powerful assessment tool.

It should also be recognized that chronic toxicity end-points have shown a better correlation with instream response (U.S. EPA 1990). This points to the potential differences between assessing acute toxicity *alone* and a more comprehensive evaluation that includes chronic end-points. Also, it was evident that toxicity in the mixing zone had a better agreement than effluent toxicity *alone*. These should be important considerations in regulatory applications.

More testing and analysis is needed if we are to understand better the strengths and limitations of bioassays and biosurveys. A more detailed comparison including percent mortality, effluent toxicity variability, instream waste concentrations (IWC), area of degradation values (ADV), and revisiting the bioassay validation issue with the new generation instream community measures should result in a better understanding of the relationship between bioassays and biosurveys. This would undoubtedly support the formulation of more accurate and effective regulatory approaches.

References

Ohio Environmental Protection Agency. 1987a. Biological criteria for the protection of aquatic life: Volume I. The role of biological data in water quality assessment. Division of Water Quality Monitoring and Assessment, Surface Water Section, Columbus, Ohio.

Ohio Environmental Protection Agency. 1987b. Biological criteria for the protection of aquatic life: Volume II. Users manual for biological field assessment of Ohio surface waters. Division of Water Quality Monitoring and Assessment, Surface Water Section, Columbus, Ohio.

Ohio Environmental Protection Agency. 1989c. Manual of Ohio EPA Surveillance Methods & Quality Assurance Practices, 1989. Division of Environmental Services, Columbus, Ohio

Ohio Environmental Protection Agency. 1989b. Biological criteria for the protection of aquatic life: Volume III. Standardized biological field sampling and laboratory methods for assessing fish and macroinvertebrate communities. Division of Water Quality Monitoring and Assessment, Columbus, Ohio.

Ohio Environmental Protection Agency. 1989c. Addendum to Biological criteria for the protection of aquatic life: Volume II. Users manual for biological field assessment of Ohio surface waters. Division of Water Quality Monitoring and Assessment, Surface Water Section, Columbus, Ohio.

U. S. EPA. 1990. Technical support document for water quality-based toxics control. Office of Water, U. S. EPA, Washington D.C. 20460.

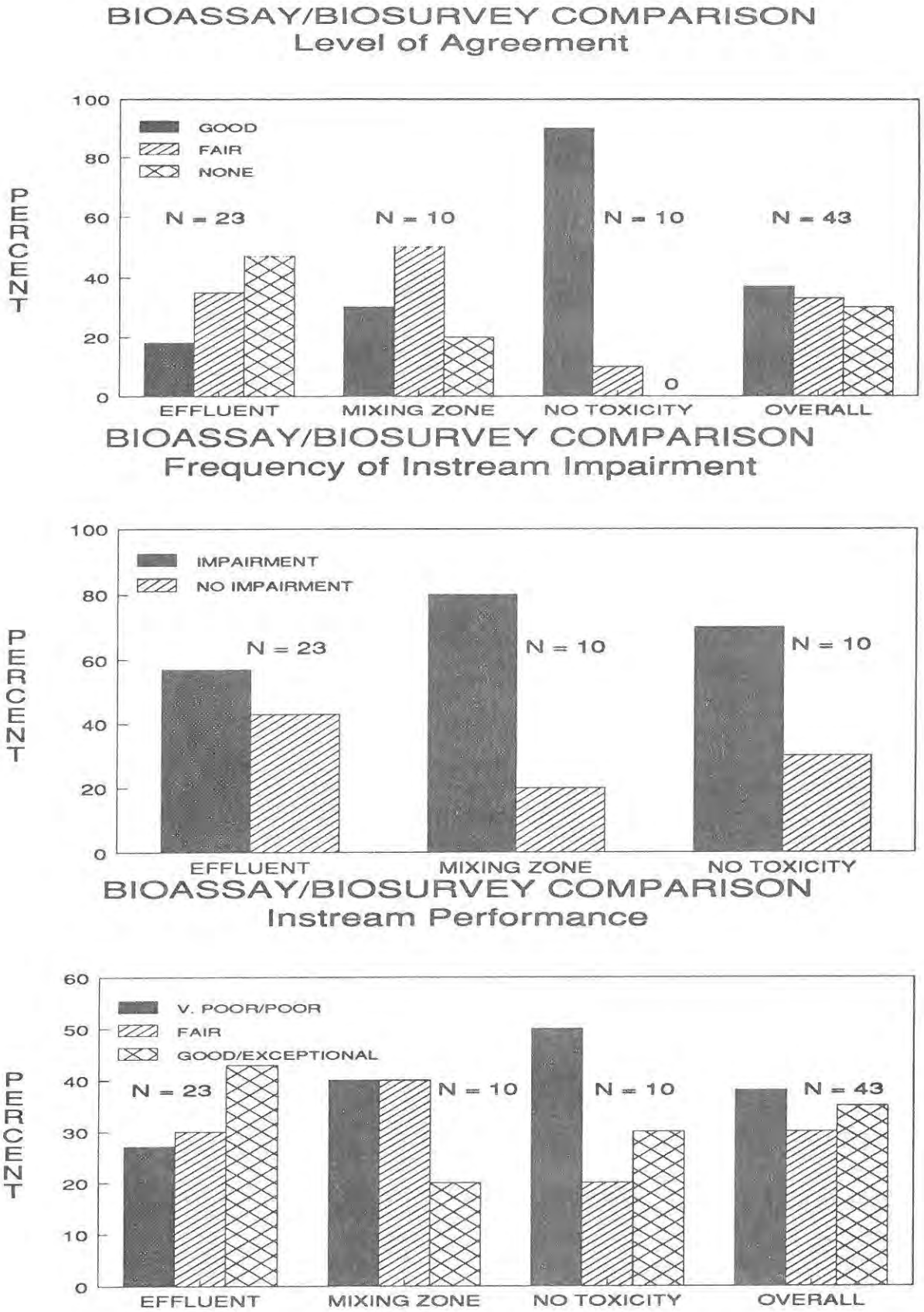


Figure 1. Comparison bioassay and biosurvey results comparing three categories of bioassay results (**EFFLUENT** - effluent toxicity only; **MIXING ZONE** - effluent and mixing zone toxicity; **NO TOXICITY** - <20% mortality) with biosurvey results showing level of agreement (top), instream impairment status (middle), and instream community performance.

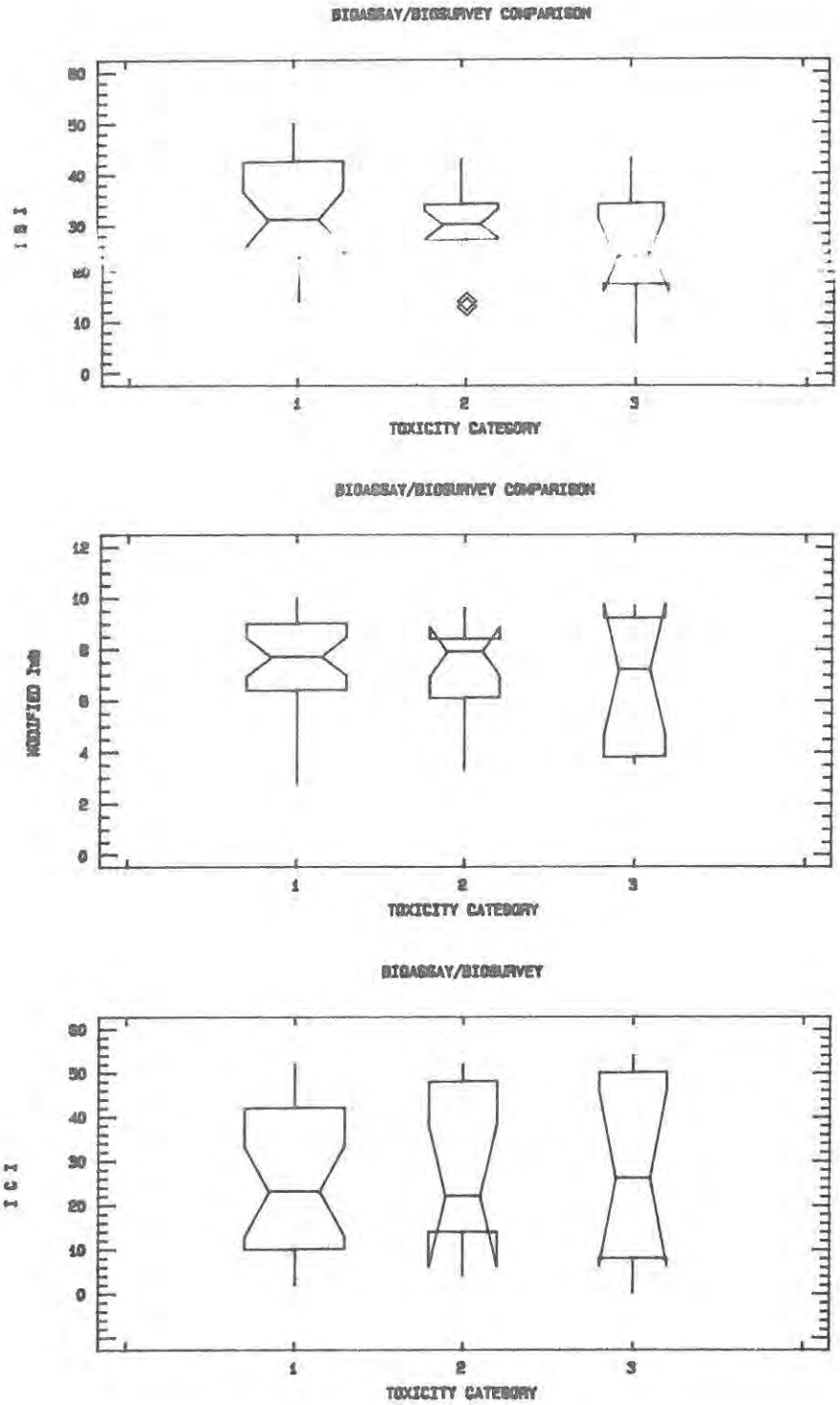


Figure 2. Ranges of the Index of Biotic Integrity (IBI; top), Modified Index of Well-Being (MIwb; middle), and the Invertebrate Community Index (ICI; bottom) measured at sampling sites used in the comparison of bioassay and biosurvey results for 43 discharges. Toxicity result categories are: 1 - effluent mortality $\geq$ 20%, 2 - effluent and mixing zone mortality >20%, and 3 - mortality <20%.

Volume II
Ohio Water Resource Inventory

A. Waterbody Segment Assessment Summaries

This Volume contains summary assessments for each of the waterbodies that has been assessed by the Ecological Assessment Section since 1978. Methods of assessing aquatic life use attainment are explained in detail in Volume I. When available, biosurvey data was the ultimate arbiter of aquatic life use attainment. Sources and causes of partial or non-attainment of aquatic life uses were classified as major (■) moderate(●), or minor (▲) based on an integrated assessment of the available data and the best professional judgement of the biologists who conducted the field investigations. Only causes and sources of impairment that currently exist are listed. *Possible* causes and sources whose effects are not currently exhibited are not listed; as a waterbody recovers some of these sources and causes may become evident and they will be listed at that time. This data can be also be accessed through the U.S. EPA mainframe version of the WBS (Waterbody System) or data can be requested in PC formats (e.g., dBASE) directly from Ohio EPA (contact Ed Rankin; 614-466-3700). Table 1 provides a summary of aquatic life use attainment status by sub-basin. Figure 1 provides a key to the location of these watersheds in Ohio.

B. Economic Analyses

Chapters 6111.44-46 of the Ohio Revised Code require the approval of the director of the Ohio EPA prior to installing or altering any sewerage, or treatment works for sewage disposal, or treatment of industrial waters. The Ohio EPA issues, following plan review and approval, "Permits to Install" (PTIs) for all such actions. Information on the expenditures in Ohio for pollution control activities was gathered from PTIs issued from Jan 87 to Dec 88.

Expenditures were divided by river basin and type of pollution control activity and represent the capital cost of equipment. No figures are available for operation and maintenance expenditures. the total expenditure in the State of Ohio was $789.0 million dollars. Table 2 provides a break-down of expenditures by basin. Figures 2 through 7 provide a break-down of expenditures by type of pollution control activity for each basin as well as for the entire State. In some cases it was impossible to determine from the data in which basin the expenditure took place. These items are totaled under "Overlapping Basins" and included in the total figure for the State. Codes for the types of pollution control activities are: (1) publicly owned treatment works, (2) industrial treatment facilities, (3) pretreatment facilities, (4) on-lot systems, (5) semi-public facilities, (6) sewers, pumps, and life stations, and (7) other.

Figure 1. Watersheds used for summarizing use attainment in Ohio:
1 - UPPER MAHONING RIVER; **2** - LOWER MAHONING RIVER; **3** - PYMATUNING CREEK; **4** - LITTLE BEAVER CREEK; **5** - CENTRAL TRIBS (YELLOW CREEK AND CROSS CREEK); **6** - CENTRAL TRIBS (SHORT CREEK AND WHEELING CR.); **7** - CENTRAL TRIBS (MCMAHON, CAPTINA, SUNFISH CR.); **8** - LITTLE MUSKINGUM RIVER; **9** - DUCK CREEK; **10** - UPPER TUSCARAWAS RIVER; **11** - NIMISHILLEN CREEK; **12** - CONOTTON CREEK; **13** - SUGAR CREEK; **14** - STILLWATER CREEK; **15** - LOWER TUSCARAWAS RIVER; **16** - BLACK FORK, CLEAR FORK, ROCKY FORK MOHICAN R.; **17** - LAKE FORK, JEROME FORK, MUDDY FORK MOHICAN R.;**18** - KOKOSING RIVER; **19** - KILLBUCK CREEK; **20** - UPPER MUSKINGUM RIVER AND WAKATOMIKA CREEK; **21** - WILLS CREEK; **22** - LICKING RIVER; **23** - MIDDLE MUSKINGUM RIVER; **24** - LOWER MUSKINGUM RIVER; **25** - UPPER HOCKING RIVER; **26** - MIDDLE HOCKING RIVER; **27** - LOWER HOCKING RIVER; **28** - SE TRIBS (SHADE RIVER AND LEADING CREEK); **29** - SE TRIBS (LOWER RACCOON CREEK); **30** - SE TRIBS (UPPER RACCOON CREEK); **31** - SE TRIBS (LITTLE INDIAN GUYAN CREEK); **32** - SE TRIBS (SYMMES CREEK); **33** - SE TRIBS (LITTLE SCIOTO RIVER AND PINE CREEK); **34** - UPPER SCIOTO RIVER (AND LITTLE SCIOTO RIVER); **35** - SCIOTO RIVER (MILL CR.,BOKES CR., FULTON CR.); **36** - UPPER OLENTANGY RIVER; **37** - LOWER OLENTANGY RIVER; **38** - BIG WALNUT CREEK; **39** - BIG DARBY CREEK; **40** - WALNUT CREEK; **41** - MIDDLE SCIOTO RIVER (INCLUDING DEER CREEK); **42** - UPPER PAINT CREEK; **43** - LOWER PAINT CREEK (N. FK. AND ROCKY FK.); **44** - SALT CREEK; **45** - SCIOTO RIVER (SUNFISH CR.,BEAVER CR.); **46** - LOWER SCIOTO RIVER (AND SCIOTO BRUSH CREEK); **47** - SW TRIBS (EAGLE CREEK AND STRAIGHT CREEK); **48** - OHIO BRUSH CREEK; **49** - SW TRIBS (WHITEOAK CR.,INDIAN CR., BEAR CR.); **50** - UPPER LITTLE MIAMI RIVER; **51** - CAESAR CREEK; **52** - TODD FORK; **53** - EAST FORK LITTLE MIAMI RIVER; **54** - LOWER LITTLE MIAMI RIVER; **55** - UPPER GREAT MIAMI RIVER; **56** - GREAT MIAMI RIVER AND LORAMIE CREEK; **57** - STILLWATER RIVER; **58** - MAD RIVER; **59** - TWIN CREEK; **60** - MIDDLE GREAT MIAMI RIVER; **61** - FOURMILE CREEK; **62** - LOWER GREAT MIAMI RIVER AND WHITEWATER RIVER; **63** - WABASH RIVER; **64** - ST. MARYS RIVER; **65** - ST. JOSEPH RIVER; **66** - BLANCHARD RIVER; **67** - LOWER AUGLAIZE RIVER; **68** - OTTAWA RIVER; **69** - LITTLE AUGLAIZE RIVER; **70** - UPPER AUGLAIZE RIVER; **71** - UPPER MAUMEE RIVER (INCLUDING GORDON CREEK); **72** - TIFFIN RIVER; **73** - UPPER MIDDLE MAUMEE RIVER; **74** - LOWER MIDDLE MAUMEE RIVER; **75** - LOWER MAUMEE RIVER (AND OTTAWA RIVER); **76** - LAKE ERIE TRIBS MAUMEE R. TO PORTAGE R.; **77** - UPPER PORTAGE RIVER; **78** - LOWER PORTAGE RIVER; **79** - TYMOCHTEE CREEK; **80** - UPPER SANDUSKY RIVER; **81** - MIDDLE SANDUSKY RIVER; **82** - LOWER SANDUSKY RIVER; **83** - LAKE ERIE TRIBS SANDUSKY R. TO VERMILION R.; **84** - VERMILION RIVER; **85** - HURON RIVER; **86** - BLACK RIVER; **87** - ROCKY RIVER; **88** - UPPER CUYAHOGA RIVER; **89** - LOWER CUYAHOGA RIVER; **90** - LAKE ERIE TRIBS (CHAGRIN RIVER); **91** - UPPER GRAND RIVER; **92** - LOWER GRAND RIVER; **93** - ASHTABULA RIVER AND CONNEAUT CREEK.

Table 1. Overall aquatic life use attainment for all aquaticlife uses by subbasin based on monitored level data. Subbasin numbers are the first two digits of the Ohio waterbody ID after 'OH' and are referenced in Volume I.

Subbasin Number	Subbasin	Total Length	Aquatic Life Use Attainment					
			Full	Threatened	Partial	None	Not Assessed.	Not Fishable
1	UPPER MAHONING RIVER	89.1	23.5	7.2	2.2	10.5	45.7	11.7
2	LOWER MAHONING RIVER	179.5	2.5		11.1	73.6	92.3	80.0
3	PYMATUNING CREEK	58.2	5.8		.5	11.4	40.5	11.9
4	LITTLE BEAVER CREEK	181.1	41.7	36.4	29.1	49.6	24.3	86.6
5	CENTRAL TRIBS (YELLOW CREEK AND CROSS CREEK)	206.0	83.6	5.5	26.6	72.4	17.9	85.1
6	CENTRAL TRIBS (SHORT CREEK AND WHEELING CR.)	131.4	21.2	8.0	6.8	28.5	66.9	25.2
7	CENTRAL TRIBS (MCMAHON, CAPTINA, SUNFISH CR.)	203.2	131.5	19.6	1.1	43.7	7.3	37.2
8	LITTLE MUSKINGUM RIVER	161.5	147.1		1.4		13.0	.9
9	DUCK CREEK	74.5	13.6	12.8	34.3	.5	13.3	
10	UPPER TUSCARAWAS RIVER	226.3	16.3		25.7	116.6	67.7	142.3
11	NIMISHILLEN CREEK	128.2	11.4	1.1	13.9	59.7	42.1	72.2
12	CONOTTON CREEK	110.8	15.3		21.4	8.7	65.4	39.5
13	SUGAR CREEK	84.0	2.3	.5	1.0	1.7	78.5	2.7
14	STILLWATER CREEK	86.0	1.3		1.0	3.7	80.0	4.7
15	LOWER TUSCARAWAS RIVER	128.4	18.9	20.3	20.0	11.9	57.3	31.9
16	BLACK FORK, CLEAR FORK, ROCKY FORK MOHICAN R.	121.8	9.4		3.7	47.5	61.2	51.2
17	LAKE FORK, JEROME FORK, MUDDY FORK MOHICAN R.	112.8	22.1		.7	16.4	73.6	17.1
18	KOKOSING RIVER	116.0	21.2		47.1	7.6	40.1	54.7
19	KILLBUCK CREEK	197.8	61.4		25.4	39.0	71.9	64.4
20	UPPER MUSKINGUM RIVER AND WAKATOMIKA CREEK	92.6	32.5	19.7	3.8	1.5	35.1	5.3
21	WILLS CREEK	236.3	56.5		9.0	154.7	16.1	156.4
22	LICKING RIVER	285.0	103.6	48.3	38.9	30.0	64.2	68.9
23	MIDDLE MUSKINGUM RIVER	187.3	18.7	13.8	13.7	54.8	86.3	30.9
24	LOWER MUSKINGUM RIVER	159.4	21.6	7.0	43.5	4.6	82.7	48.1
25	UPPER HOCKING RIVER	162.3	13.1	2.3	27.4	68.3	51.2	61.2
26	MIDDLE HOCKING RIVER	117.9	3.3	2.0		22.9	89.7	8.8
27	LOWER HOCKING RIVER	46.2	2.0		3.5	1.5	39.2	5.0
28	SE TRIBS (SHADE RIVER AND LEADING CREEK)	18.2				18.2		18.2
29	SE TRIBS (LOWER RACCOON CREEK)	61.9	12.9	.5		38.9	9.6	24.7
30	SE TRIBS (UPPER RACCOON CREEK)	175.8			4.2	130.0	41.6	39.6
31	SE TRIBS (LITTLE INDIAN GUYAN CREEK)	42.4	7.8		4.3	7.0	23.3	11.3

Table 1. Overall aquatic life use attainment for all aquaticlife uses by subbasin based on monitored level data. Subbasin numbers are the first two digits of the Ohio waterbody ID after 'OH' and are referenced in Volume I.

Subbasin Number	Subbasin	Total Length	Aquatic Life Use Attainment					
			Full	Threatened	Partial	None	Not Assessed.	Not Fishable
32	SE TRIBS (SYMMES CREEK)	40.4	4.4			9.8	26.2	9.8
33	SE TRIBS (LITTLE SCIOTO RIVER AND PINE CREEK)	99.2	4.9		27.1	9.8	57.4	36.9
34	UPPER SCIOTO RIVER (AND LITTLE SCIOTO RIVER)	172.3	14.3		41.2	39.5	77.3	77.7
35	SCIOTO RIVER (MILL CR.,BOKES CR., FULTON CR.)	141.1	15.1	4.0	31.5	44.6	45.9	74.1
36	UPPER OLENTANGY RIVER	82.7	11.3		8.0	7.9	55.5	15.9
37	LOWER OLENTANGY RIVER	88.3	5.5	2.1	23.3	25.3	40.0	40.7
38	BIG WALNUT CREEK	116.0	21.9	4.0	15.7	28.0	46.4	43.7
39	BIG DARBY CREEK	182.5	24.8	41.1	47.4	26.2	43.0	73.6
40	WALNUT CREEK	142.5	43.3	10.6	18.3	25.7	44.6	44.0
41	MIDDLE SCIOTO RIVER (INCLUDING DEER CREEK)	178.6	64.6	14.0	33.5	33.6	32.9	69.9
42	UPPER PAINT CREEK	119.6	15.9		19.1	9.9	74.7	29.0
43	LOWER PAINT CREEK (N. FK. AND ROCKY FK.)	125.1	42.7	4.8	7.0	10.9	59.7	17.9
44	SALT CREEK	97.9	24.2	.5	12.2	44.3	16.7	56.5
45	SCIOTO RIVER (SUNFISH CR.,BEAVER CR.)	108.6	22.4		48.7	2.5	35.0	51.2
46	LOWER SCIOTO RIVER (AND SCIOTO BRUSH CREEK)	54.7	5.1	7.3	22.0	3.6	16.7	25.6
47	SW TRIBS (EAGLE CREEK AND STRAIGHT CREEK)	36.7	8.8		20.5	7.4		27.9
48	OHIO BRUSH CREEK	130.3	55.3	1.8	40.3	30.2	2.7	70.5
49	SW TRIBS (WHITEOAK CR.,INDIAN CR., BEAR CR.)	88.7	50.4			29.0	9.3	29.0
50	UPPER LITTLE MIAMI RIVER	142.8	15.9		8.4	67.5	51.0	75.9
51	CAESAR CREEK	53.6	27.4			.5	25.7	.5
52	TODD FORK	108.8	5.9		4.2	15.2	83.5	19.4
53	EAST FORK LITTLE MIAMI RIVER	153.1	30.5	2.2	14.4	48.9	57.1	63.3
54	LOWER LITTLE MIAMI RIVER	102.5	9.1	10.0	33.8	15.6	34.0	49.4
55	UPPER GREAT MIAMI RIVER	134.9	18.2		36.6	36.8	43.3	73.4
56	GREAT MIAMI RIVER AND LORAMIE CREEK	153.2	46.4		26.7	13.9	66.2	40.6
57	STILLWATER RIVER	194.3	13.7		63.2	73.3	44.1	136.5
58	MAD RIVER	192.8	23.9	41.5	33.9	31.9	61.6	65.8
59	TWIN CREEK	76.6	17.2		29.1	13.4	16.9	42.5
60	MIDDLE GREAT MIAMI RIVER	202.0	37.1		27.2	66.6	71.1	89.7
61	FOURMILE CREEK	50.2	17.1		5.7	8.3	19.1	14.0
62	LOWER GREAT MIAMI RIVER AND WHITEWATER	139.4	5.2	7.1	20.2	55.6	51.3	75.8

Table 1. Overall aquatic life use attainment for all aquaticlife uses by subbasin based on monitored level data. Subbasin numbers are the first two digits of the Ohio waterbody ID after 'OH' and are referenced in Volume I.

Subbasin Number	Subbasin	Total Length	Aquatic Life Use Attainment					
			Full	Threatened	Partial	None	Not Assessed.	Not Fishable
63	WABASH RIVER	45.6	4.9		11.0	20.9	8.8	30.9
64	ST. MARYS RIVER	144.3	5.4		11.0	63.9	64.0	73.9
65	ST. JOSEPH RIVER (INCLUDING GORDON CREEK)	129.0	2.4		39.6	31.9	55.1	67.5
66	BLANCHARD RIVER	128.4	29.2		17.7	41.1	40.4	53.8
67	LOWER AUGLAIZE RIVER	82.4	9.5		20.4	20.3	32.2	40.7
68	OTTAWA RIVER	125.8	10.6	5.4	8.7	89.4	11.7	98.1
69	LITTLE AUGLAIZE RIVER	175.8	19.1		14.7	123.4	18.6	137.2
70	UPPER AUGLAIZE RIVER	132.8	36.4		22.1	65.5	8.8	87.6
71	UPPER MAUMEE RIVER	137.0	2.9		7.7	20.0	106.4	27.7
72	TIFFIN RIVER	163.9	5.6		22.9	64.1	71.3	87.0
73	UPPER MIDDLE MAUMEE RIVER	103.4	10.9		15.5	66.5	10.5	82.0
74	LOWER MIDDLE MAUMEE RIVER	61.0	28.2		1.0	24.8	7.0	25.8
75	LOWER MAUMEE RIVER (AND OTTAWA RIVER)	169.5	19.1		3.0	67.9	79.5	72.2
76	LAKE ERIE TRIBS MAUMEE R. TO PORTAGE R.	120.4	34.8			25.0	60.6	25.0
77	UPPER PORTAGE RIVER	98.2	9.2			37.3	51.7	37.3
78	LOWER PORTAGE RIVER	35.2	17.7	2.0	15.5			15.5
79	TYMOCHTEE CREEK	21.4			1.1	20.3		21.4
80	UPPER SANDUSKY RIVER	88.8	8.9		16.9	63.0		79.9
81	MIDDLE SANDUSKY RIVER	119.6	55.4	1.1	21.8	22.3	19.0	44.1
82	LOWER SANDUSKY RIVER	116.9	64.2		30.2	21.3	1.2	51.5
83	LAKE ERIE TRIBS SANDUSKY R. TO VERMILION R.	65.7	2.0		11.7	39.6	12.4	51.3
84	VERMILION RIVER	77.2	10.0		6.9	28.8	31.5	35.7
85	HURON RIVER	157.8	65.8	14.9	21.8	23.9	31.4	45.7
86	BLACK RIVER	112.6	10.6		.4	51.3	50.3	51.7
87	ROCKY RIVER	159.4	51.6		25.1	52.7	30.0	77.8
88	UPPER CUYAHOGA RIVER	112.4	3.0		21.0	41.7	46.7	68.4
89	LOWER CUYAHOGA RIVER	189.6	4.0	4.6	2.9	119.3	58.8	113.6
90	LAKE ERIE TRIBS (CHAGRIN RIVER)	105.7	18.7	53.2	13.4	15.0	5.4	28.4
91	UPPER GRAND RIVER	70.8	29.0		10.9	3.0	27.9	13.9
92	LOWER GRAND RIVER	84.9	37.3		16.1	9.7	21.8	25.8
93	ASHTABULA RIVER AND CONNEAUT CREEK	85.6	9.3			24.5	51.8	18.5

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH25 1	01-001 – HOCKING RIVER (RUSH CREEK TO CLEAR CREEK)	8.20	WWH	0.0	0.0	0.0	8.2	0.0	8.2	Y	8800	8200	■					
OH25 23	01-001 – HOCKING RIVER (HEADWATERS TO RUSH CREEK)	16.40	WWH	0.0	0.0	0.4	14.2	1.8	14.6	Y	8800	8200	■					
OH26 36	01-001 – HOCKING RIVER (SCOTT CREEK TO MONDAY CREEK)	20.10	WWH	0.0	2.0	0.0	0.0	18.1	0.0		9002	8809		■				
OH27 39	01-001 – HOCKING RIVER (ATHENS TO FEDERAL CREEK)	19.60	WWH	0.0	0.0	3.5	1.0	15.1	4.5		9002	8809		■				
OH26 1	01-001 – HOCKING RIVER (MONDAY CREEK TO ATHENS)	14.00	WWH	1.1	0.0	0.0	0.0	12.9	0.0		9002	8809		■				
OH26 42	01-036 – OLDTOWN CREEK	7.10	WWH	0.0	0.0	0.0	0.5	6.6	0.5		8800	8600			■			
OH26 43	01-037 – SCOTT CREEK	9.00	WWH	0.7	0.0	0.0	8.3	0.0	8.3		8800	7800		■				
OH25 2	01-042 – BUCK RUN	5.10	WWH	0.0	0.0	0.5	0.0	4.6	0.5		8800	7800			■			
OH25 25	01-046 – EWING RUN (BALDWIN RUN)	4.60	WWH	0.0	0.0	0.0	0.5	4.1	0.5	Y	8800	8200	■					
OH25 27	01-048 – HUNTERS RUN	7.50	WWH	0.0	0.0	0.0	1.1	6.4	1.1	Y	8800	8200	■					
OH26 42.1	01-049 – TRIB. TO OLDTOWN CREEK (GENERAL ELECTRIC)	1.00	WWH	0.5	0.0	0.0	0.0	0.5	0.0		8800	8600			■			
OH27 14	01-100 – FEDERAL CREEK (MCDOUGALL BRANCH TO HOCKING R)	11.20	LWH	0.5	0.0	0.0	0.0	10.7	0.0		8800	8400				■		
OH27 24.1	01-134 – SULPHUR RUN	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7900			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH25 1										●	▲	■						
OH25 23	●		■		●							■			▲			
OH26 36																		
OH27 39															■			■
OH26 1																		
OH26 42					●							■						
OH26 43										■	■							
OH25 2					●													
OH25 25			●								▲	■			●			
OH25 27	▲		●			■									●			
OH26 42.1																		
OH27 14																		
OH27 24.1																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH25 1		■	■													●									▲											
OH25 23		■	■				▲							●								▲			▲											
OH26 36																																				
OH27 39				●																					■											
OH26 1																																				
OH26 42	■																																			
OH26 43																■																				
OH25 2	■																																			
OH25 25	●													■											●											
OH25 27	■													●											●											
OH26 42.1																																				
OH27 14																																				
OH27 24.1																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

09/05/90

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH27 24	01-160 – SHARPS FORK	4.50	EWH	0.5	0.0	0.0	0.0	4.0	0.0		8800	8300			■			
OH27 25.1	01-164 – TRIB. TO OPOSSUM RUN (RM 1.0)	1.00	WWH	0.5	0.0	0.0	0.0	0.5	0.0		8800	7900			■			
OH27 28	01-170 – MCDOUGALL BRANCH	7.90	EWH	0.0	0.0	0.0	0.5	7.4	0.5		8800	8400				■		
OH26 8	01-200 – SUNDAY CREEK (W. BR. SUNDAY CR. TO HOCKING R)	13.10	LRW	0.0	0.0	0.0	13.1	0.0	0.0		8800	7800			■			
OH26 14	01-240 – WEST BRANCH SUNDAY CREEK	15.00	WWH	0.5	0.0	0.0	0.0	14.5	0.0		8800	7900			■			
OH26 25	01-300 – MONDAY CREEK	26.00	LRW	0.0	0.0	0.0	0.5	25.5	0.0		9002	8808			■			
OH26 26	01-310 – SNOW FORK	10.60	LRW	0.0	0.0	0.0	0.5	10.1	0.0		9002	8008			■			
OH26 26.1	01-314 – TRIB. TO SNOW FORK (RM 6.7)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7900			■			
OH25 4	01-400 – CLEAR CREEK	20.00	WWH	0.0	2.3	17.6	0.1	0.0	17.7		8905	8809	■					
OH25 7	01-420 – MUDDY PRAIRIE RUN	7.20	WWH	1.2	0.0	0.0	0.0	6.0	0.0		8800	8200	■					
OH25 8	01-430 – DUNKLE RUN	7.20	WWH	0.0	0.0	0.0	0.5	6.7	0.5		8800	8200	■					
OH25 4.2	01-440 – AMANDA CREEK	1.00	WWH	0.0	0.0	0.0	1.0	0.0	1.0		8905	8909			■			
OH25 4.1	01-441 – DACE DITCH (AMANDA)	1.00	WWH	0.0	0.0	0.0	1.0	0.0	1.0		8905	8909			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH27 24																		
OH27 25.1																		
OH27 28											■	●		▲				
OH26 8										■	●							
OH26 14																		
OH26 25										■	■							
OH26 26										■								
OH26 26.1																		
OH25 4											▲	■			■			
OH25 7																		
OH25 8	▲										■							
OH25 4.2															■			
OH25 4.1													●		■			

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH27 24																																				
OH27 25.1																																				
OH27 28						■																				▲										
OH26 8															■	●																				
OH26 14																																				
OH26 25															■																					
OH26 26															■																					
OH26 26.1																																				
OH25 4																						■		■											■	
OH25 7																																				
OH25 8						■																														
OH25 4.2	▲	▲																						■												
OH25 4.1	▲	▲																						■											●	

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

09/05/90

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH25 9	01-450 – MUDDY PRAIRIE CREEK	3.40	WWH	0.5	0.0	0.0	0.0	2.9	0.0		8800	8200			■			
OH25 12	01-500 – RUSH CREEK (LITTLE RUSH CREEK TO HOCKING R.)	16.70	LRW	0.0	0.0	8.9	7.8	0.0	0.0		8800	8200	■					
OH25 20	01-500 – RUSH CREEK	13.30	LRW	0.0	0.0	0.0	13.3	0.0	0.0		8800	8200	■					
OH25 20.1	01-501 – BLUNTNOSE CREEK (TRIB. TO RUSH CREEK)	1.00	WWH	0.0	0.0	0.0	1.0	0.0	1.0		8800	8200	■					
OH25 13	01-510 – DURBIN RUN	3.20	WWH	0.0	0.0	0.0	3.2	0.0	3.2		8800	8200	■					
OH25 14	01-520 – TURKEY RUN	4.50	WWH	1.9	0.0	0.0	0.0	2.6	0.0		8800	8200	■					
OH25 15	01-530 – RACCOON RUN	8.00	WWH	0.0	0.0	0.0	8.0	0.0	8.0	Y	8800	8200	■					
OH25 16	01-540 – LITTLE RUSH CREEK	8.00	WWH	0.0	0.0	0.0	2.4	5.6	2.4		8800	8200	■					
OH25 21	01-550 – CENTER BRANCH RUSH CREEK	9.50	WWH	0.0	0.0	0.0	1.5	8.0	1.5		8800	8200	■					
OH25 21.1	01-551 – SOMERSET CREEK	7.00	WWH	7.0	0.0	0.0	0.0	0.0	0.0		8905	8909		■				
OH25 21.5	01-552 – TRIB. TO SOMERSET CREEK (RM 2.7)	1.00	WWH	0.5	0.0	0.0	0.0	0.5	0.0		8800	7900			■			
OH25 21.4	01-553 – TRIB. TO SOMERSET CREEK (RM 1.8)	1.00	WWH	0.5	0.0	0.0	0.0	0.5	0.0		8800	7900			■			
OH25 21.3	01-554 – TRIB. TO SOMERSET CREEK (RM 1.2)	1.00	WWH	0.5	0.0	0.0	0.0	0.5	0.0		8800	7900			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH25 9																		
OH25 12						●				●	▲	■			●			
OH25 20					▲					■	●				●			
OH25 20.1											■	●			▲			
OH25 13											■			▲	●			
OH25 14																		
OH25 15											▲				■			
OH25 16											▲					■		
OH25 21										▲	●				■			
OH25 21.1																		
OH25 21.5																		
OH25 21.4																		
OH25 21.3																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulatbn	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH25 9																																				
OH25 12	■														●									▲												
OH25 20						▲									■									●												
OH25 20.1						■																		●												
OH25 13																								■			▲									
OH25 14																																				
OH25 15						▲																		■												
OH25 16						●		▲							▲		■					▲														
OH25 21															▲			●						■												
OH25 21.1																																				
OH25 21.5																																				
OH25 21.4																																				
OH25 21.3																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH25 21.2	01-555 – TRIB. TO CENTER BRANCH (RM 2.3)	1.00	WWH	0.5	0.0	0.0	0.0	0.5	0.0		8800	7900		■				
OH25 21.6	01-556 – Unnamed tributary	1.00		0.5	0.0	0.0	0.0	0.5	0.0		8800	7900						
OH25 22	01-560 – TURKEY RUN	4.50	LRW	0.0	0.0	0.0	4.5	0.0	0.0		8800	8200	■					
OH34 5	02-001 – SCIOTO RIVER (RUSH CREEK TO LITTLE SCIOTO RIV	12.20	WWH	0.0	0.0	12.2	0.0	0.0	12.2		8800	8700	■					
OH34 13	02-001 – SCIOTO RIVER (PANTHER CREEK TO RUSH CREEK)	14.00	WWH	0.0	0.0	14.0	0.0	0.0	14.0	Y	8800	8400	■					
OH34 17	02-001 – SCIOTO RIVER (SILVER CREEK TO PANTHER CREEK)	9.50	WWH	0.0	0.0	1.5	8.0	0.0	9.5	Y	8800	7900	■					
OH34 24	02-001 – SCIOTO RIVER (HEADWATERS TO SILVER CREEK)	36.90	WWH	0.0	0.0	3.6	8.4	24.9	12.0		8800	8400	■					
OH35 12	02-001 – SCIOTO RIVER (BOKES CREEK TO MILL CREEK)	6.50	WWH	0.0	0.0	6.5	0.0	0.0	6.5		8800	7900	■					
OH35 24	02-001 – SCIOTO RIVER (FULTON CREEK TO BOKES CREEK)	3.60	WWH	0.0	0.0	3.6	0.0	0.0	3.6		8800	7900	■					
OH35 27	02-001 – SCIOTO RIVER (LITTLE SCIOTO R. TO FULTON CR.)	11.90	WWH	0.0	0.0	5.3	6.6	0.0	11.9		8800	8700	■					
OH37 19	02-001 – SCIOTO RIVER (INDIAN RUN TO OLENTANGY RIVER)	12.80	WWH	3.8	0.0	5.2	3.8	0.0	9.0		8800	8600	■					
OH37 25	02-001 – SCIOTO RIVER (MILL CREEK TO INDIAN RUN)	10.20	WWH	0.0	0.0	0.0	10.2	0.0	10.2	Y	8800	7900	■					
OH45 29	02-001 – SCIOTO RIVER (PEEPEE CREEK TO SUNFISH CREEK)	11.20	WWH	0.0	0.0	11.2	0.0	0.0	11.2		8800	8500	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH25 21.2																		
OH25 21.6																		
OH25 22												●		●	■			
OH34 5												■						
OH34 13												■						
OH34 17	●				●							■						
OH34 24												■			●			
OH35 12												■						
OH35 24												■						
OH35 27	●	■										●	●		▲			
OH37 19									●					▲	■			
OH37 25															■			
OH45 29	●											■						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH25 21.2																																				
OH25 21.6																																				
OH25 22															▲									●												■
OH34 5						■		▲																												
OH34 13						■		▲																												
OH34 17		●												●																						
OH34 24		■				▲		▲																●												
OH35 12						■		▲																												
OH35 24						■																														
OH35 27	●	●																				■				▲										
OH37 19						●																				■	●									
OH37 25																										■										
OH45 29	■																																			

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

09/05/90

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH45 44	02-001 – SCIOTO RIVER (SALT CREEK TO PEEPEE CREEK)	13.10	WWH	1.9	0.0	11.2	0.0	0.0	11.2		8800	8500	■					
OH45 56	02-001 – SCIOTO RIVER (PAINT CREEK TO SALT CREEK)	12.30	WWH	7.3	0.0	5.0	0.0	0.0	5.0		8800	8500	■					
OH46 1	02-001 – SCIOTO RIVER (SCIOTO BRUSH CREEK TO OHIO RIVE	9.20	WWH	4.6	0.0	3.4	1.2	0.0	4.6		8800	8500	■					
OH46 84	02-001 – SCIOTO RIVER (SUNFISH CREEK TO SCIOTO BRUSH C	17.60	WWH	0.0	0.0	17.6	0.0	0.0	17.6		8800	8500	■					
OH41 1	02-001 – SCIOTO RIVER (KINNIKINNICK CREEK TO PAINT CR)	19.50	WWH	0.0	2.1	17.4	0.0	0.0	17.3		9002	8809	■					
OH41 6	02-001 – SCIOTO RIVER (SCIPPO CR. TO KINNIKINNICK CR.)	6.60	WWH	0.0	0.0	6.6	0.0	0.0	6.6		9002	8809	■					
OH41 33	02-001 – SCIOTO RIVER (BIG DARBY CREEK TO SCIPPO CR.)	11.20	WWH	0.0	9.5	1.7	0.0	0.0	1.7		9002	8809	■					
OH40 1	02-001 – SCIOTO RIVER (WALNUT CREEK TO BIG DARBY CR.)	5.30	WWH	0.0	5.3	0.0	0.0	0.0	0.0		9002	8809	■					
OH40 23	02-001 – SCIOTO RIVER (BIG WALNUT CREEK TO WALNUT CR.)	11.10	WWH	0.0	5.3	5.8	0.0	0.0	5.8		9002	8809	■					
OH37 1	02-001 – SCIOTO RIVER (SCIOTO BIG RUN TO BIG WALNUT C)	7.20	WWH	1.7	0.0	5.5	0.0	0.0	5.5		9002	8809	■					
OH37 6	02-001 – SCIOTO RIVER (OLENTANGY R. TO SCIOTO BIG RUN)	7.90	WWH	0.0	0.0	0.0	7.9	0.0	0.0		9002	8809	■					
OH45 20	02-022 – BEAVER CREEK	23.20	WWH	1.9	0.0	21.3	0.0	0.0	21.3		8800	8500	■					
OH45 21	02-023 – LITTLE BEAVER CREEK	4.20	WWH	3.3	0.0	0.0	0.0	0.9	0.0		8800	8500	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH45 44	▲											■						
OH45 56	▲											■						
OH46 1												■						
OH46 84	●											■						
OH41 1											●	●			■			
OH41 6											●				■			
OH41 33											●				■			
OH40 1																		
OH40 23																		
OH37 1												■						
OH37 6												■						
OH45 20						■												
OH45 21																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH45 44	■																																	▲		
OH45 56	■																																	▲		
OH46 1	■																																			
OH46 84	●																																			
OH41 1		●				●																						■								
OH41 6						●																						■								
OH41 33						●																						■								
OH40 1																																				
OH40 23																																				
OH37 1		■																																		
OH37 6		■		●																																
OH45 20															▲		▲																			
OH45 21																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH45 34	02-035 – PEEPEE CREEK	14.50	WWH	0.0	0.0	0.0	0.5	14.0	0.5		8800	7900	■					
OH41 34	02-069 – SCIPPO CREEK	17.50	WWH	2.9	0.0	0.3	0.0	14.3	3.2	Y	8800	8400		■				
OH40 4	02-078 – WALNUT CREEK (LITTLE WALNUT CREEK TO SCIOTO R	5.50	WWH	5.5	0.0	0.0	0.0	0.0	0.0	Y	8800	8200	■					
OH40 9	02-078 – WALNUT CREEK (GEORGE CREEK TO LITTLE WALNUT C	15.70	WWH	15.0	0.0	0.7	0.0	0.0	0.7	Y	8800	8200	■					
OH40 13	02-078 – WALNUT CREEK (SYCAMORE CREEK TO GEORGE CREEK)	8.00	WWH	8.0	0.0	0.0	0.0	0.0	0.0	Y	8800	8200	■					
OH40 16	02-078 – WALNUT CREEK (PAWPAW CREEK TO SYCAMORE CREEK)	12.20	WWH	0.5	0.0	4.8	6.9	0.0	11.7		8800	8200	■					
OH40 21	02-078 – WALNUT CREEK (HEADWATERS TO PAWPAW CREEK)	8.60	WWH	0.0	0.0	5.7	0.0	2.9	5.7		8800	8200	■					
OH40 5	02-079 – LITTLE WALNUT CREEK	15.00	WWH	11.1	0.0	0.0	0.0	3.9	0.0		8800	8600		■				
OH40 12	02-084 – GEORGES CREEK	9.70	WWH	0.0	0.0	0.0	1.8	7.9	1.8		8800	8700		■				
OH40 15	02-085 – SYCAMORE CREEK	13.60	WWH	2.7	0.0	0.5	1.5	8.9	2.0		8800	8400		■				
OH40 19	02-087 – PAWPAW CREEK	4.70	WWH	0.0	0.0	0.0	0.9	3.8	0.9	Y	8800	8200	■					
OH40 25	02-089 – GROVE RUN	4.00	WWH	0.0	0.0	0.0	0.0	4.0	0.0		8800	8100					■	
OH37 4	02-092 – SCIOTO BIG RUN	8.00	WWH	0.0	0.0	0.0	0.0	8.0	0.0		8800	7900					■	

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH45 34						■												
OH41 34			■															
OH40 4																		
OH40 9												■						
OH40 13												■						
OH40 16			●									■						
OH40 21												■						
OH40 5																		
OH40 12												■						
OH40 15						●						■						
OH40 19	●											■						
OH40 25																		
OH37 4																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulatbn	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH45 34													▲	▲																						
OH41 34	■																																			
OH40 4																																				
OH40 9		■					▲																													
OH40 13		■																																		
OH40 16	■	●																																		
OH40 21		■					▲																													
OH40 5																																				
OH40 12		■																				▲														
OH40 15		■																				▲														
OH40 19	■													●																						
OH40 25																																				
OH37 4																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH38 1	02-100 – BIG WALNUT CREEK (ALUM/BLACKLICK CR. TO SCIOT	15.30	WWH	3.6	0.0	0.6	1.9	9.2	2.5	Y	8800	8600	■					
OH38 18	02-100 – BIG WALNUT CREEK (ROCKY FORK TO ALUM CREEK)	13.00	WWH	4.5	0.0	0.0	0.0	8.5	0.0		8800	8600	■					
OH38 28	02-100 – BIG WALNUT CREEK (CULVER CREEK TO L. WALNUT C	6.40	WWH	3.0	0.0	0.0	3.4	0.0	3.4		8800	8200	■					
OH38 40	02-100 – BIG WALNUT CREEK (HEADWATERS TO REYNOLDS RUN)	7.20	WWH	0.0	0.0	0.0	5.0	2.2	5.0		9002	8809		■				
OH38 36	02-100 – BIG WALNUT CREEK (REYNOLDS RUN TO CULVER CR.)	9.40	WWH	6.0	0.0	0.0	0.0	3.4	0.0		9001	8809		■				
OH38 20	02-100 – BIG WALNUT CREEK (HOOVER DAM TO ROCKY FORK)	9.30	WWH	0.0	4.0	0.0	0.0	5.3	0.0		9002	8909		■				
OH38 39	02-103 – LONG RUN	6.40	WWH	0.0	0.0	4.3	2.1	0.0	6.4	Y	8800	8400	■					
OH37 27	02-108 – EVERSOLE RUN	3.60	WWH	0.0	0.0	1.5	0.0	2.1	1.5		8800	7900	■					
OH35 1	02-109 – MILL CREEK (OTTER RUN TO SCIOTO RIVER)	23.80	WWH	0.0	6.9	11.9	5.0	0.0	16.9	Y	8800	8600	■					
OH35 9	02-109 – MILL CREEK (HEADWATERS TO OTTER RUN)	6.20	WWH	6.2	0.0	0.0	0.0	0.0	0.0		8800	8600	■					
OH38 2	02-110 – ALUM CREEK (COLUMBUS BOUNDARY TO BIG WALNUT C	19.90	WWH	0.0	0.0	8.4	11.5	0.0	19.9		8800	8600	■					
OH38 29	02-125 – PRAIRIE RUN	3.60	WWH	0.0	0.0	0.0	2.0	1.6	2.0		8800	8200	■					
OH35 2	02-126 – BLUES CREEK	12.50	WWH	0.0	0.0	0.5	0.0	12.0	0.5		8800	7800		■				

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH38 1					▲	●						■						
OH38 18																		
OH38 28												■						
OH38 40												▲		■				
OH38 36														■				
OH38 20																		
OH38 39												■			▲			
OH37 27															■			
OH35 1					■	■						■						
OH35 9																		
OH38 2											▲	■		●				
OH38 29						■						■						
OH35 2					■													

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH38 1		■												▲	▲																					
OH38 18																																				
OH38 28		■																				▲														
OH38 40																						▲														■
OH38 36																																				■
OH38 20																																				
OH38 39								■																▲												
OH37 27													▲									▲				■										
OH35 1	■	●												●																						
OH35 9																																				
OH38 2		■											▲	■												●										
OH38 29	●	■												●																						
OH35 2																						▲														

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Biosurvey-A	Intensive Biosurvey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH38 17	02-130 – BLACKLICK CREEK	25.50	WWH	7.8	0.0	6.5	6.0	5.2	4.5	Y	8800	8700	■					
OH35 7	02-132 – PHELPS RUN	5.00	WWH	0.5	0.0	0.0	0.0	4.5	0.0		8800	8600			■			
OH35 8	02-133 – CROSSES RUN	1.90	WWH	0.0	0.0	0.0	1.9	0.0	1.9		8800	8600	■					
OH35 15	02-138 – BOKES CREEK (BRUSH CREEK TO SCIOTO RIVER)	19.70	WWH	0.5	0.0	0.0	0.0	19.2	0.0		8800	8300			■			
OH35 18	02-138 – BOKES CREEK (HEADWATERS TO BRUSH RUN)	15.30	WWH	0.0	0.0	0.0	14.3	1.0	14.3		8800	8100	■					
OH35 19	02-144 – POWDERLICK RUN	5.10	WWH	0.0	0.0	0.0	5.1	0.0	5.1		9002	8906		■				
OH35 25	02-145 – FULTON CREEK	16.60	WWH	7.9	0.0	3.7	5.0	0.0	8.7	Y	8800	8600	■					
OH34 1	02-158 – LITTLE SCIOTO RIVER (ROCK FORK TO SCIOTO RIVE	10.40	WWH	0.0	0.0	1.4	9.0	0.0	10.4	Y	8800	8700	■					
OH34 3	02-158 – LITTLE SCIOTO RIVER (HEADWATERS TO ROCK FORK)	16.80	WWH	0.0	0.0	0.8	0.0	16.0	0.8		8800	8300				■		
OH34 2	02-159 – HONEY CREEK	2.30	WWH	0.0	0.0	0.5	0.7	1.1	1.2		8800	8700	■					
OH34 8	02-165 – RUSH CREEK	40.10	WWH	1.1	0.0	7.2	0.0	31.8	7.2		8800	8400				■		
OH34 25	02-181 – TAYLOR CREEK	7.80	WWH	5.7	0.0	0.0	1.4	0.7	1.4	Y	8800	8400	■					
OH34 26	02-182 – SILVER CREEK	7.30	WWH	4.5	0.0	0.0	0.0	2.8	0.0		8800	8400	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH38 17						■						■						
OH35 7																		
OH35 8		■		●		■												
OH35 15																		
OH35 18						■					●	■						
OH35 19									■			■			●			
OH35 25												■						
OH34 1	■		■								●					■		
OH34 3											■	■		■				
OH34 2						■												
OH34 8						■												
OH34 25												■						
OH34 26																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH38 17		■												▲●																						
OH35 7																																				
OH35 8	■						▲																													
OH35 15																																				
OH35 18		■				▲		●														■														
OH35 19						■																		●												
OH35 25		■																																		
OH34 1	■	■																						●									■			
OH34 3						■		■																												■
OH34 2						▲		▲																												
OH34 8						▲		▲																												
OH34 25	■																																			
OH34 26																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

09/05/90

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH34 32	02-188 – COTTONWOOD DITCH	7.00	WWH	1.8	0.0	0.0	5.2	0.0	7.0	Y	8800	8400	■					
OH35 21	02-194 – W. FK. WEST MANSFIELD TRIB.	3.00	WWH	0.0	0.0	0.0	3.0	0.0	3.0		8800	8100	■					
OH35 22	02-195 – E. FK. WEST MANSFIELD TRIB.	4.00	WWH	0.0	0.0	0.0	1.0	3.0	1.0		8800	8100	■					
OH41 6.1	02-196 – BLACKWATER CREEK	6.00	WWH	0.0	0.0	0.0	6.0	0.0	6.0		8905	8809		■				
OH37 7	02-197 – KIAN RUN	7.90	WWH	0.0	0.0	0.5	0.0	7.4	0.5		8800	8100			■			
OH40 17	02-199 – CARROLL UNNAMED TRIB.	2.20	WWH	0.5	0.0	0.0	0.0	1.7	0.0		8800	8200	■					
OH39 1	02-200 – BIG DARBY CREEK (DARBYVILLE TO SCIOTO RIVER)	12.00	EWH	0.0	3.7	4.5	3.8	0.0	8.3		8800	8100	■					
OH39 7	02-200 – BIG DARBY CREEK (L. DARBY CREEK TO HELLBARNCH	8.40	EWH	4.1	0.0	4.3	0.0	0.0	4.3		8800	8100	■					
OH39 19	02-200 – BIG DARBY CREEK (FITZGERALD DITCH TO L. DARBY	10.90	EWH	0.0	0.0	5.7	5.2	0.0	10.9		8800	8100	■					
OH39 21	02-200 – BIG DARBY CREEK (SUGAR RUN TO FITZGERALD DITC	5.90	EWH	0.0	0.0	5.9	0.0	0.0	5.9		8800	8600	■					
OH39 22	02-200 – BIG DARBY CREEK (BUCK RUN TO SUGAR RUN)	12.80	EWH	0.0	9.6	2.8	0.4	0.0	3.2		8800	8600	■					
OH39 26	02-200 – BIG DARBY CREEK (SPAIN CREEK TO BUCK RUN)	10.60	EWH	0.0	10.6	0.0	0.0	0.0	0.0		9002	8909	■					
OH39 2	02-200 – BIG DARBY CREEK (HELLBRANCH RUN TO DARBYVILLE	13.70	EWH	13.7	0.0	0.0	0.0	0.0	0.0		8905	8809		■				

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH34 32												■			■			
OH35 21												■			■			
OH35 22												■			●			
OH41 6.1												▲		●				■
OH37 7					■													
OH40 17												■						
OH39 1												■						
OH39 7												■						
OH39 19					▲						▲	■			●			
OH39 21					■						▲	■						
OH39 22					■						▲	■						
OH39 26																		■
OH39 2																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Talings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH34 32		■																						■												
OH35 21								■																												
OH35 22						▲		●														■														
OH41 6.1																																			●	■
OH37 7	■													●																						
OH40 17																						■														
OH39 1	■					●																														
OH39 7		■				●																▲														
OH39 19		■													▲											●										
OH39 21	■	■				▲																														
OH39 22	■	■				▲		▲						▲																						
OH39 26																																				■
OH39 2																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

09/05/90

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH39 31	02-200 – BIG DARBY CREEK (HEADWATERS TO SPAIN CREEK)	10.70	EWH	0.0	3.9	6.8	0.0	0.0	6.8		9002	8909	■					
OH39 6	02-204 – HELLBRANCH RUN	12.80	WWH	0.0	12.8	0.0	0.0	0.0	0.0		8800	8100	■					
OH39 23	02-206 – SUGAR RUN	7.00	WWH	0.0	0.0	0.0	1.0	6.0	1.0		8800	8100	■					
OH39 24	02-207 – ROBINSON RUN	3.20	WWH	0.0	0.0	0.2	0.0	3.0	0.2		8800	8600					■	
OH39 27	02-209 – BUCK RUN	6.80	WWH	0.0	0.0	0.2	6.6	0.0	6.8		8800	8100	■					
OH39 8	02-210 – LITTLE DARBY CREEK (SPRING FORK TO BIG DARBY	7.50	EWH	0.0	0.0	3.5	4.0	0.0	7.5		8800	8700	■					
OH39 10	02-210 – LITTLE DARBY CREEK (TREACLE CREEK TO SPRING F	13.80	EWH	0.0	0.0	8.0	0.0	5.8	8.0		8800	8300				■		
OH39 15	02-210 – LITTLE DARBY CREEK (HEADWATERS TO TREACLE CRE	23.70	EWH	0.0	0.0	0.0	0.5	23.2	0.5		8800	8700		■				
OH39 30	02-221 – PLEASANT RUN	8.00	WWH	3.0	0.0	0.0	0.0	5.0	0.0		9002	8909	■					
OH39 31.1	02-222 – SPAIN CREEK	4.00	WWH	4.0	0.0	0.0	0.0	0.0	0.0		9002	8909	■					
OH39 33	02-223 – FLAT BRANCH	4.70	WWH	0.0	0.0	0.0	4.7	0.0	4.7		9002	8909	■					
OH40 20	02-224 – ZELLERBACH TRIB.	3.00	WWH	0.0	0.0	0.0	0.5	2.5	0.5		8800	8200	■					
OH40 22	02-225 – PLEASANTVILLE-THURSTON WWTP TRIB.	7.40	WWH	0.0	0.0	0.0	1.0	6.4	1.0		8800	8200	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH39 31												■						
OH39 6																		
OH39 23											●	■						
OH39 24																		
OH39 27											●	■			■			
OH39 8												■						
OH39 10						■												
OH39 15												■						
OH39 30																		
OH39 31.1																		
OH39 33											●				■			
OH40 20														■				
OH40 22															■			

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH39 31														■																						
OH39 6																																				
OH39 23						▲		■																												
OH39 24																																				
OH39 27								■																					■							
OH39 8	■													●								▲														
OH39 10						▲																														
OH39 15	■					▲																														
OH39 30																																				
OH39 31.1																																				
OH39 33						▲								●										■												
OH40 20																																				■
OH40 22																								■												

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH40 14	02-226 – TUSSING DITCH	8.00	WWH	0.0	0.0	0.0	8.0	0.0	8.0		8800	8700		■				
OH35 23	02-229 – MAYOR PAINTER DITCH	2.00	LRW	0.0	0.0	0.0	2.0	0.0	0.0	Y	8800	8100	■					
OH40 12.1	02-231 – TRIB. TO GEORGES CREEK	8.50	WWH	0.0	0.0	0.8	5.1	2.6	5.9		8800	8700		■				
OH35 25.1	02-233 – TRIB. TO FULTON CREEK	2.00	WWH	0.0	0.0	0.0	0.2	1.8	0.2		8800	8500	■					
OH34 1.2	02-235 – COLUMBIA DITCH	2.00	MWH	0.0	0.0	0.0	2.0	0.0	2.0		8800	8700	■					
OH34 1.1	02-236 – ROCKSWALE DITCH	3.00	LRW	0.0	0.0	0.0	3.0	0.0	0.0		8800	8700	■					
OH34 1.3	02-237 – NORTH ROCKSWALE DITCH	3.00	MWH	3.0	0.0	0.0	0.0	0.0	0.0		8800	8700	■					
OH37 19.1	02-238 – INDIAN RUN	5.00	WWH	0.0	0.0	0.5	0.0	4.5	0.5		8800	8500		■				
OH35 1.1	02-239 – TOWN RUN	2.00	WWH	0.0	0.0	0.0	0.5	1.5	0.5		8800	7800		■				
OH39 31.2	02-251 – LITTLE DARBY CREEK	6.00	WWH	0.0	0.5	5.5	0.0	0.0	5.5		9002	8909	■					
OH41 7	02-300 – DEER CREEK (HAY RUN TO SCIOTO RIVER)	7.20	WWH	7.2	0.0	0.0	0.0	0.0	0.0		8800	8700				■		
OH41 11	02-300 – DEER CREEK (DRY RUN TO HAY RUN)	9.60	WWH	9.1	0.0	0.0	0.5	0.0	0.5		8800	7900		■				
OH41 12	02-300 – DEER CREEK (DEER CREEK DAM TO DRY RUN)	7.00	WWH	7.0	0.0	0.0	0.0	0.0	0.0		8800	7900		■				

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH40 14					●										■				●																								■													
OH35 23						■						■																												■															
OH40 12.1												■								■																																				
OH35 25.1					■							■										■										■																								
OH34 1.2					■							■			●				■																									●												
OH34 1.1	■				■											■			■																																					
OH34 1.3																																																								
OH37 19.1					■																																																			■
OH35 1.1					■														●													■																								
OH39 31.2															■																												■												
OH41 7																																																								
OH41 11																																																								
OH41 12																																																								

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH41 18	02-300 – DEER CREEK (BRADFORD/SUGAR CREEK TO DEER CR.	11.80	WWH	2.8	0.0	3.1	5.9	0.0	9.0		8800	8500	■					
OH41 26	02-300 – DEER CREEK (OAK RUN TO BRADFORD CREEK)	9.00	WWH	2.9	0.0	1.1	5.0	0.0	6.1		8800	8500	■					
OH41 30	02-300 – DEER CREEK (HEADWATERS TO OAK RUN)	19.80	WWH	1.2	0.0	0.0	0.0	18.6	0.0		8800	8500	■					
OH41 8	02-301 – WAUGH RUN	5.50	WWH	5.5	0.0	0.0	0.0	0.0	0.0		8800	7900		■				
OH41 9	02-302 – HAY RUN	7.50	WWH	4.9	0.0	0.5	2.1	0.0	2.6		8800	8700		■				
OH41 10	02-303 – STALL RUN	1.70	WWH	1.7	0.0	0.0	0.0	0.0	0.0		8800	7900		■				
OH41 13	02-304 – DRY RUN	6.00	WWH	6.0	0.0	0.0	0.0	0.0	0.0		8800	7900		■				
OH41 14	02-305 – BUSKIRK CREEK	5.30	WWH	5.3	0.0	0.0	0.0	0.0	0.0		8800	7900		■				
OH41 17	02-307 – GEORGES RUN	2.50	WWH	2.5	0.0	0.0	0.0	0.0	0.0		8800	8300				■		
OH41 28	02-316 – OAK RUN	16.00	WWH	1.6	0.0	2.3	12.1	0.0	14.4	Y	8800	8500	■					
OH41 32	02-319 – NORTH FORK DEER CREEK	4.00	WWH	4.0	0.0	0.0	0.0	0.0	0.0		8800	8300				■		
OH41 28.1	02-320 – JONES DITCH	2.00	WWH	0.0	0.0	0.0	2.0	0.0	2.0	Y	8800	8500		■				
OH41 30.1	02-322 – CHILDRENS HOME DITCH	2.90	WWH	0.0	2.4	0.5	0.0	0.0	0.5		9002	8906		■				

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH41 18					▲						■							
OH41 26											■							
OH41 30																		
OH41 8																		
OH41 9												■						
OH41 10																		
OH41 13																		
OH41 14																		
OH41 17																		
OH41 28		▲			▲							■						
OH41 32																		
OH41 28.1												■						
OH41 30.1												■						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH41 18		●				■		●																												
OH41 26						■		●																												
OH41 30																																				
OH41 8																																				
OH41 9		■																																		
OH41 10																																				
OH41 13																																				
OH41 14																																				
OH41 17																																				
OH41 28		■								▲																						▲				
OH41 32																																				
OH41 28.1																																				■
OH41 30.1		■																																		

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH36 35	02-400 – OLENTANGY RIVER (HEADWATERS TO MUD RUN)	27.60	WWH	2.8	0.0	0.0	6.0	18.8	6.0	Y	8800	8600		■				
OH37 9	02-400 – OLENTANGY RIVER (BARTHOLOMEW RUN TO SCIOTO R)	14.50	WWH	0.0	2.9	8.2	3.4	0.0	9.5		9002	8909	■					
OH37 13	02-400 – OLENTANGY RIVER (DELAWARE RUN TO BARTHOLOMEW)	11.20	WWH	0.0	7.2	4.0	0.0	0.0	4.0		9002	8909	■					
OH36 1	02-400 – OLENTANGY RIVER (WHETSTONE CREEK TO DELAWARE)	10.40	WWH	1.1	0.0	2.5	0.7	6.1	3.2		9002	8909	■					
OH36 12	02-450 – WHETSTONE CREEK (HEADWATERS TO SHAW CREEK)	26.50	WWH	7.4	0.0	5.5	0.7	12.9	6.2	Y	8800	8400	■					
OH36 11	02-453 – SHAW CREEK	18.20	WWH	0.0	0.0	0.0	0.5	17.7	0.5		8800	8400	■					
OH43 1	02-500 – PAINT CREEK (N. FK. PAINT CREEK TO SCIOTO RIV	8.10	WWH	0.0	4.8	0.0	3.3	0.0	3.3		8800	8500	■					
OH43 20	02-500 – PAINT CREEK (LOWER TWIN CR. TO N. FK. PAINT C	11.50	EWH	0.0	0.0	0.5	0.0	11.0	0.5		8800	7900		■				
OH43 27	02-500 – PAINT CREEK (ROCKY FORK TO LOWER TWIN CREEK)	17.50	EWH	8.7	0.0	0.0	0.0	8.8	0.0		9003	8910	■					
OH42 1	02-500 – PAINT CREEK (UPPER RESERVOIR TO ROCKY FORK)	13.90	EWH	5.0	0.0	0.0	0.0	8.9	0.0		9003	8910	■					
OH42 24	02-500 – PAINT CREEK (SUGAR CREEK TO UPPER PAINT CREEK	9.60	WWH	9.6	0.0	0.0	0.0	0.0	0.0		9003	8910	■					
OH42 31	02-500 – PAINT CREEK (E. FK. PAINT CREEK TO SUGAR CREE	8.40	WWH	0.1	0.0	8.3	0.0	0.0	8.3		9003	8910	■					
OH42 35	02-500 – PAINT CREEK (JEFFERSONVILLE TO E. FK. PAINT C	12.60	WWH	0.1	0.0	4.8	0.0	7.7	4.8		9003	8910	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH36 35					■	■						■						
OH37 9												■		●	●			
OH37 13									■			■						
OH36 1												▲		■	●			
OH36 12						■		▲				■						
OH36 11											■							
OH43 1	●		●		●							■						
OH43 20						■												
OH43 27																		
OH42 1																		
OH42 24																		
OH42 31												■						
OH42 35					▲							●			●			■

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulatbn	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH36 35		■												■																						
OH37 9	▲													■												■										
OH37 13		■												▲								▲														
OH36 1																										■	■									
OH36 12		■																▲				▲														
OH36 11						■		▲										▲																		
OH43 1	■																																			
OH43 20																																				■
OH43 27																																				
OH42 1																																				
OH42 24																																				
OH42 31		■																																		
OH42 35		●																							●								▲			■

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH43 2	02-510 – NORTH FORK PAINT CREEK (LITTLE CREEK TO PAINT	12.00	WWH	1.1	0.0	0.0	0.0	10.9	0.0		8800	8500	■					
OH43 8	02-510 – NORTH FORK PAINT CREEK (COMPTON CR. TO LITTLE	12.60	WWH	12.6	0.0	0.0	0.0	0.0	0.0		8800	8500	■					
OH43 15	02-522 – COMPTON CREEK (HEADWATERS TO NORTH FK. PAINT	19.90	WWH	1.5	0.0	0.0	0.0	18.4	0.0		8800	8300			■			
OH43 38	02-530 – ROCKY FORK (ROCKY FORK LAKE TO PAINT CREEK)	9.00	EWH	9.0	0.0	0.0	0.0	0.0	0.0	Y	8800	8000		■				
OH43 51	02-530 – ROCKY FORK (HEADWATERS TO ROCKY FORK LAKE)	8.10	EWH	1.9	0.0	3.1	3.1	0.0	6.2		8800	8500	■					
OH43 49	02-540 – CLEAR CREEK	13.30	EWH	6.4	0.0	3.4	3.5	0.0	6.9		8800	8500	■					
OH43 50	02-541 – HUSSEY RUN	2.10	EWH	0.5	0.0	0.0	0.0	1.6	0.0		8800	8300		■				
OH42 15	02-550 – RATTLESNAKE CREEK (WEST BRANCH TO LEES CREEK)	17.40	EWH	1.1	0.0	6.0	0.0	10.3	6.0		8800	8400			■			
OH42 16	02-562 – WEST BRANCH RATTLESNAKE CREEK)	11.80	WWH	0.0	0.0	0.0	5.0	6.8	5.0		8800	8700	■					
OH42 18	02-563 – WILSON CREEK	10.20	WWH	0.0	0.0	0.0	1.9	8.3	1.9		8800	8700	■					
OH42 30	02-579 – SUGAR CREEK (HEADWATERS TO PAINT CREEK)	35.70	WWH	0.0	0.0	0.0	3.0	32.7	3.0		8800	8600	■					
OH43 49.3	02-585 – MOBERLY BRANCH CLEAR CREEK	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8500	■					
OH43 49.5	02-586 – WEST FORK CLEAR CREEK	3.00	WWH	0.0	0.0	0.0	0.5	2.5	0.5		8800	8300	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH43 2																		
OH43 8																		
OH43 15																		
OH43 38																		
OH43 51															■			
OH43 49					●							■						
OH43 50																		
OH42 15						■												
OH42 16															■			
OH42 18						■						■						
OH42 30															■			
OH43 49.3																		
OH43 49.5												■						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH43 2																																				
OH43 8																																				
OH43 15																																				
OH43 38																																				
OH43 51																										■										
OH43 49		■																																		
OH43 50																																				
OH42 15						▲		▲														▲														
OH42 16																								■												
OH42 18		■																																		
OH42 30																								■												
OH43 49.3																																				
OH43 49.5																																				■

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

09/05/90

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH43 49.2	02-587 – LITTLE ROCK CREEK	2.00	WWH	0.0	0.0	0.0	0.5	1.5	0.5		8800	8500			■			
OH43 49.1	02-588 – COON CREEK	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8300			■			
OH43 49.4	02-589 – TRIB. TO CLEAR CREEK (RM 8.5)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8200			■			
OH44 19	02-600 – SALT CREEK (PIKE RUN TO LITTLE SALT CREEK)	9.60	EWH	9.6	0.0	0.0	0.0	0.0	0.0		8800	8400				■		
OH44 33	02-600 – SALT CREEK (LAUREL RUN TO QUEER CREEK)	7.70	EWH	7.7	0.0	0.0	0.0	0.0	0.0		8800	8400				■		
OH44 3	02-610 – LITTLE SALT CREEK (BUCKEYE CREEK TO SALT CREE	21.30	WWH	0.0	0.0	1.5	18.6	1.2	20.1		8800	8600	■					
OH44 16	02-610 – LITTLE SALT CREEK (HEADWATERS TO BUCKEYE CREE	7.30	WWH	0.0	0.0	0.0	7.3	0.0	7.3	Y	8800	8600	■					
OH44 4	02-611 – MIDDLE FORK SALT CREEK (PIGEON CR. TO L. SALT	4.40	WWH	0.0	0.5	0.5	0.0	3.4	0.5		9002	8906	■					
OH44 8	02-611 – MIDDLE FK. SALT CREEK (HEADWATERS TO PIGEON)	19.40	WWH	6.9	0.0	10.2	0.0	2.3	10.2		9002	8809	■					
OH44 5	02-612 – PIGEON CREEK (HEADWATERS TO MIDDLE FORK)	14.00	WWH	0.0	0.0	0.0	4.2	9.8	4.2		8800	8600				■		
OH44 17	02-622 – BUCKEYE CREEK	7.70	WWH	0.0	0.0	0.0	7.7	0.0	7.7		8800	8600	■					
OH44 18	02-623 – FOURMILE CREEK	6.50	WWH	0.0	0.0	0.0	6.5	0.0	6.5		8800	8600	■					
OH46 7	02-700 – SCIOTO BRUSH CREEK (MCCULLOUGH CREEK TO SCIOT	0.90	EWH	0.0	0.0	0.0	0.9	0.0	0.9		8800	7900	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH43 49.2												■						
OH43 49.1																		
OH43 49.4																		
OH44 19																		
OH44 33																		
OH44 3												■						
OH44 16					■		■				■	■						
OH44 4											■							●
OH44 8											■							●
OH44 5							■					■						
OH44 17											■							
OH44 18														■				
OH46 7							■											

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH43 49.2																																				■
OH43 49.1																																				
OH43 49.4																																				
OH44 19																																				
OH44 33																																				
OH44 3		■																▲																		
OH44 16		■				■		■																												
OH44 4																■																				
OH44 8																■																				
OH44 5		■																▲				▲														
OH44 17						▲		▲										▲																		
OH44 18																																				■
OH46 7																▲		▲																		

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

09/05/90

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH46 63	02-700 – SCIOTO BRUSH CREEK (RARDEN CREEK TO SOUTH FOR	7.00	EWH	0.0	0.0	0.0	0.5	6.5	0.5		8800	7900			■			
OH46 23	02-710 – SOUTH FORK	8.30	EWH	0.0	7.3	1.0	0.0	0.0	1.0		8800	8400				■		
OH46 36	02-722 – TURKEY RUN	3.00	EWH	0.0	0.0	0.0	0.5	2.5	0.5		8800	7900			■			
OH46 42	02-728 – MILL CREEK	5.00	EWH	0.0	0.0	0.0	0.5	4.5	0.5		8800	7900			■			
OH46 51	02-737 – BLUE CREEK	3.70	EWH	0.5	0.0	0.0	0.0	3.2	0.0		8800	7900			■			
OH45 1	02-800 – SUNFISH CREEK (CHENOWETH FORK TO SCIOTO RIVER	8.50	WWH	7.5	0.0	0.0	1.0	0.0	1.0		8800	8300				■		
OH45 14	02-800 – SUNFISH CREEK (HEADWATERS TO MORGAN FORK)	4.30	WWH	0.0	0.0	0.0	0.5	3.8	0.5		8800	7900			■			
OH45 3	02-802 – CHENOWETH FORK	9.50	WWH	0.5	0.0	0.0	0.0	9.0	0.0		8800	7900			■			
OH45 11	02-809 – MORGAN FORK	7.80	WWH	0.0	0.0	0.0	0.5	7.3	0.5		8800	7900			■			
OH91 25	03-001 – GRAND RIVER (MUD CREEK TO COFFEE CREEK)	9.50	WWH	9.5	0.0	0.0	0.0	0.0	0.0		8800	8400				■		
OH91 28	03-001 – GRAND RIVER (HEADWATERS TO MUD CREEK)	13.60	WWH	1.9	0.0	10.7	1.0	0.0	11.7	Y	8800	8700	■					
OH92 16	03-001 – GRAND RIVER (MILL CREEK TO PAINE CREEK)	9.30	WWH	1.0	0.0	8.3	0.0	0.0	8.3		8800	8700	■					
OH92 20	03-001 – GRAND RIVER (MILL CREEK TO MILL CREEK)	17.70	WWH	17.7	0.0	0.0	0.0	0.0	0.0		8800	8700	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modifcation	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH46 63					■													
OH46 23						■												
OH46 36					■													
OH46 42					■													
OH46 51																		
OH45 1															■			
OH45 14					■													
OH45 3																		
OH45 11					■													
OH91 25																		
OH91 28								■										
OH92 16						■												
OH92 20																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH46 63						▲									▲		▲																			
OH46 23															▲		▲																			
OH46 36						▲									▲		▲																			
OH46 42						▲									▲		▲																			
OH46 51																																				
OH45 1																	▲																			■
OH45 14																	▲																			
OH45 3																																				
OH45 11																	▲																			
OH91 25																																				
OH91 28																															■			●		
OH92 16																																				■
OH92 20																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

09/05/90

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH91 14	03-001 – GRAND RIVER (COFFEE CREEK TO HOSKINS CREEK)	15.70	EWH	0.5	0.0	0.0	0.0	15.2	0.0		8800	8300		■				
OH92 1	03-001 – GRAND RIVER (PAINE CREEK TO LAKE ERIE)	9.30	EWH	6.3	0.0	2.8	0.2	0.0	3.0		9003	8709	■					
OH92 1.1	03-001 – GRAND RIVER (ESTUARY)	5.00	WWH	0.8	0.0	4.2	0.0	0.0	4.2		9003	8709	■					
OH92 2	03-002 – BLACK BROOK	2.00	WWH	2.0	0.0	0.0	0.0	0.0	0.0		8800	8400			■			
OH91 24	03-021 – COFFEE CREEK	6.40	WWH	6.4	0.0	0.0	0.0	0.0	0.0		8800	8100			■			
OH91 26	03-022 – BAUGHMAN CREEK	9.80	WWH	9.8	0.0	0.0	0.0	0.0	0.0		8800	8400				■		
OH92 7	03-100 – BIG CREEK	17.00	WWH	9.5	0.0	0.3	6.5	0.7	6.8		8800	8700	■					
OH92 23	03-120 – MILL CREEK (ASKUE RUN TO GRAND RIVER)	19.60	WWH	0.0	0.0	0.5	0.5	18.6	1.0		8800	8400				■		
OH92 24	03-124 – CEMETERY CREEK	5.00	WWH	0.0	0.0	0.0	2.5	2.5	2.5		8800	8700		■				
OH91 1	03-130 – ROCK CREEK (LEBANON CREEK TO GRAND RIVER)	9.60	WWH	0.9	0.0	0.2	1.5	7.0	1.7		8800	8700		■				
OH91 5	03-134 – LEBANON CREEK	6.20	WWH	0.0	0.0	0.0	0.5	5.7	0.5		8800	7800			■			
OH65 1	04-001 – MAUMEE RIVER (GORDON CREEK TO TIFFIN RIVER)	15.70	WWH	0.0	0.0	9.4	6.3	0.0	15.7		8800	8400	■					
OH65 10	04-001 – MAUMEE RIVER (ZUBER CUTOFF DITCH TO GORDON CR	13.00	WWH	0.0	0.0	13.0	0.0	0.0	13.0		8800	8400	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH91 14																		
OH92 1																		
OH92 1.1	▲				■										▲			
OH92 2																		
OH91 24																		
OH91 26																		
OH92 7												■						
OH92 23														■				
OH92 24												■						
OH91 1						●						■						
OH91 5						▲						■						
OH65 1											■							
OH65 10											■	●						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH91 14																																				
OH92 1																																				
OH92 1.1														●							■															
OH92 2																																				
OH91 24																																				
OH91 26																																				
OH92 7	■																					●														
OH92 23																																				■
OH92 24	●											■										▲														
OH91 1	■																					▲														
OH91 5																					■	▲														
OH65 1						■																												■		
OH65 10	●					■																														

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH65 17	04-001 – MAUMEE RIVER (OH./IND. BORDER TO ZUBER CUTOFF	13.40	WWH	0.0	0.0	0.0	13.4	0.0	13.4		8800	8400	■					
OH71 29	04-001 – MAUMEE RIVER (TIFFIN RIVER TO AUGLAIZE RIVER)	1.70	WWH	0.0	0.0	0.0	1.7	0.0	1.7		8800	8400	■					
OH73 18	04-001 – MAUMEE RIVER (VAN HYNING CR. TO N. TURKEYFOOT	7.70	WWH	7.1	0.0	0.0	0.6	0.0	0.6		8800	8600	■					
OH73 21	04-001 – MAUMEE RIVER (WADE CREEK TO VAN HYNING CREEK)	6.60	WWH	0.0	0.0	1.1	5.5	0.0	6.6	Y	8800	8600	■					
OH73 26	04-001 – MAUMEE RIVER (AUGLAIZE RIVER TO WADE CREEK)	11.90	WWH	2.5	0.0	5.9	3.5	0.0	9.4		8800	8400	■					
OH74 1	04-001 – MAUMEE RIVER (TONTOGANY CREEK TO WATERVILLE)	3.30	WWH	3.3	0.0	0.0	0.0	0.0	0.0		8800	8600	■					
OH74 3	04-001 – MAUMEE RIVER (BEAVER CREEK TO TONTOGANY CREEK	7.10	WWH	7.1	0.0	0.0	0.0	0.0	0.0		8800	8600	■					
OH75 1	04-001 – MAUMEE RIVER (WATERVILLE TO LAKE ERIE)	20.70	WWH	0.4	0.0	1.3	19.0	0.0	20.3		8800	8600	■					
OH75 2	04-002 – DUCK CREEK	3.20	WWH	1.3	0.0	0.0	1.9	0.0	3.2		8800	8600	■					
OH75 3	04-003 – SWAN CREEK (BLUE CREEK TO MAUMEE RIVER)	22.20	WWH	0.0	0.0	0.0	22.2	0.0	22.2	Y	8800	8600	■					
OH75 9	04-003 – SWAN CREEK (AI CREEK TO BLUE CREEK)	8.40	WWH	8.4	0.0	0.0	0.0	0.0	0.0		8800	8600		■				
OH75 4	04-004 – WOLF CREEK	7.00	WWH	7.0	0.0	0.0	0.0	0.0	0.0	Y	8800	7800		■				
OH75 5	04-005 – CAIRL CREEK (FORMERLY DRY CREEK)	7.40	WWH	0.5	0.0	0.0	0.0	6.9	0.0		8800	7800						

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH65 17											▲	■						
OH71 29											●				■			
OH73 18											■	●			■			
OH73 21											■	●			■			
OH73 26					●						▲	■			●			
OH74 1																		
OH74 3											■	●						
OH75 1			■		▲						▲	■						
OH75 2					■							●						
OH75 3			●		■							●				■		
OH75 9																		
OH75 4																		
OH75 5																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewers	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH65 17		■				▲																														
OH71 29						●																				■										
OH73 18		●				■																				■										
OH73 21		●				■																				■										
OH73 26	●	■				▲								●												●										
OH74 1																																				
OH74 3		●				■																														
OH75 1																																				
OH75 2																					■	▲														
OH75 3														■																		●				
OH75 9																																				
OH75 4																																				
OH75 5																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH75 6	04-006 – BLUE CREEK (HEADWATERS TO SWAN CREEK)	11.90	WWH	0.0	0.0	0.5	0.0	11.4	0.5	Y	8800	8500	■					
OH74 2	04-013 – TONTOGANY CREEK	4.00	WWH	4.0	0.0	0.0	0.0	0.0	0.0	Y	8800	7800			■			
OH74 8	04-018 – BRUSH CREEK	12.00	WWH	12.0	0.0	0.0	0.0	0.0	0.0		8800	8100			■			
OH74 11	04-019 – YELLOW CREEK	14.60	WWH	0.0	0.0	0.0	14.6	0.0	14.6		8800	8100	■					
OH74 13	04-021 – LITTLE YELLOW CREEK	7.00	WWH	0.0	0.0	0.0	7.0	0.0	7.0		8800	8100	■					
OH74 16	04-023 – MAUMEE RIVER (BAD CREEK TO BEAVER CREEK)	5.00	WWH	1.8	0.0	1.0	2.2	0.0	3.2		8800	8600	■					
OH73 2	04-026 – BAD CREEK (HEADWATERS TO UNNAMED TRIB. S OF D	5.60	WWH	0.0	0.0	0.0	5.6	0.0	5.6	Y	8800	8400	■					
OH73 1	04-026 – BAD CREEK (TRIB. S. OF DELTA TO MAUMEE R.)	14.40	WWH	0.0	0.0	0.0	14.4	0.0	14.4		8905	8809		■				
OH73 8	04-031 – LOST CREEK	11.20	WWH	0.0	0.0	0.0	11.2	0.0	11.2		8800	8400				■		
OH73 16	04-037 – NORTH TURKEYFOOT CREEK	25.00	WWH	0.0	0.0	0.0	25.0	0.0	25.0	Y	8800	8200	■					
OH73 17	04-038 – KONZEN DITCH	7.50	WWH	0.0	0.0	7.5	0.0	0.0	7.5		8800	8400				■		
OH65 6	04-052 – GORDON CREEK	16.30	WWH	0.0	0.0	15.2	1.1	0.0	16.3		8800	8400	■					
OH65 9	04-055 – MIDDLE FORK GORDON CREEK	8.50	WWH	1.4	0.0	0.0	7.1	0.0	7.1		8800	8400	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH75 6												■						
OH74 2																		
OH74 8																		
OH74 11											●	■			▲			
OH74 13												■						
OH74 16											■	●			■			
OH73 2											■							
OH73 1												■			▲			
OH73 8												■						
OH73 16					●							■		▲				
OH73 17											■				●			
OH65 6											●	■			●			
OH65 9												■			●			

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH75 6		■																				▲														
OH74 2																																				
OH74 8																																				
OH74 11		■					●							▲											▲											
OH74 13		■					▲							●								▲														
OH74 16		●					■																			■										
OH73 2							■																													
OH73 1		●							■																▲											
OH73 8							▲																													
OH73 16		■					▲																												▲	
OH73 17							■																		●											
OH65 6		■					●																		●											
OH65 9		■																							●											

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH75 22	04-065 – BEAR CREEK (HEADWATERS TO OHIO/MICHIGAN BORDE	13.00	WWH	0.0	0.0	0.0	0.5	12.5	0.5		8800	8600		■				
OH74 9	04-070 – HICKEY DITCH	3.00	LRW	0.0	0.0	0.0	0.5	2.5	0.5		8800	8100		■				
OH71 6.1	04-072 – TRIB. TO S. POWELL CREEK	1.00	WWH	0.0	0.0	0.0	1.0	0.0	1.0		8800	8400	■					
OH71 20.1	04-073 – DISHER DITCH	4.00	WWH	0.2	0.0	0.0	1.8	2.0	1.8	Y	8800	8500	■					
OH70 13.1	04-074 – GOECKE TRIBUTARY	1.00	WWH	0.0	0.0	0.0	1.0	0.0	1.0		8800	8600		■				
OH65 9.1	04-075 – MILL CREEK	7.90		0.0	0.0	0.5	0.0	7.4	0.5		8800	8400		■				
OH71 15.1	04-076 – OPOSSUM RUN (PAULDING)	3.00	WWH	0.0	0.0	0.0	0.5	2.5	0.5		8800	8600		■				
OH70 1.1	04-078 – TRIB. TO AUGLAIZE R. (RM 19.2)	1.00	WWH	0.5	0.0	0.0	0.0	0.5	0.0		8800	8500		■				
OH70 14.1	04-079 – TRIB. TO SIXMILE CREEK (SPENCERVILLE)	0.20	WWH	0.0	0.0	0.0	0.2	0.0	0.2		8800	8500		■				
OH71 15.2	04-080 – BIG RUN (PAULDING)	2.00	WWH	0.0	0.0	0.0	0.5	1.5	0.5		8800	7900		■				
OH73 16.2	04-082 – TRIB. TO NORTH TURKEYFOOT CR. (RM 6.7)	8.00	WWH	0.0	0.0	0.5	0.0	7.5	0.5		8800	8600		■				
OH73 16.3	04-083 – TRIB. TO NORTH TURKEYFOOT CR. (RM 18.4)	1.00	WWH	0.8	0.0	0.0	0.2	0.0	0.2		8800	8600		■				
OH73 16.4	04-084 – TRIB. TO NORTH TURKEYFOOT CR. (RM 19.5)	0.50	WWH	0.5	0.0	0.0	0.0	0.0	0.0		8800	8600		■				

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH75 22												■						
OH74 9																		
OH71 6.1						■					●	●		▲	●			
OH71 20.1						●						■			▲			
OH70 13.1												■						
OH65 9.1						■						■						
OH71 15.1												■						
OH70 1.1																		
OH70 14.1												■						
OH71 15.2												■						
OH73 16.2												■						
OH73 16.3						■			■									
OH73 16.4																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Talings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulatbn	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH75 22						▲			▲					■																						
OH74 9																																				
OH71 6.1		■				●																														▲
OH71 20.1		■				●																●		▲												
OH70 13.1																															■					
OH65 9.1		■																																		
OH71 15.1		■																																		
OH70 1.1																																				
OH70 14.1		■																																		
OH71 15.2		■																																		
OH73 16.2		■																																		
OH73 16.3		■																																		
OH73 16.4																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Biosurvey-A	Intensive Biosurvey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH74 2.1	04-085 – WEST BRANCH TONTAGONY CREEK	5.00	WWH	0.0	0.0	0.0	0.5	4.5	0.5		8800	8000		■				
OH75 4.1	04-087 – DRENNAN DITCH	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7800		■				
OH75 16.3	04-088 – HAEFNER DITCH	4.40	WWH	0.0	0.0	0.0	0.5	3.9	0.5		8800	7800		■				
OH75 16.1	04-089 – HILL DITCH	5.80	WWH	0.5	0.0	0.0	0.0	5.3	0.0	Y	8800	7800		■				
OH75 16.21	04-090 – ZINC DITCH	3.90	WWH	0.0	0.0	0.0	0.5	3.4	0.5	Y	8800	7800		■				
OH75 18.1	04-091 – TRIB. TO TENMILE CREEK (RM 16.9)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8600		■				
OH73 1.1	04-092 – TRIB. TO BAD CREEK (RM 14.4)	2.00	WWH	0.0	0.0	0.0	0.5	1.5	0.5		8800	8600		■				
OH75 22.1	04-093 – TRIB. TO BEAR CREEK (RM 12.3)	3.00	WWH	0.0	0.0	0.0	0.5	2.5	0.5		8800	8600		■				
OH73 16.1	04-094 – TRIB. TO NORTH TURKEYFOOT CR. (RM 1.6)	2.00	WWH	0.0	0.0	0.5	0.0	1.5	0.5	Y	8800	8200		■				
OH70 1	04-100 – AUGLAIZE RIVER (BLANCHARD R. TO L. AUGLAIZE R	9.70	WWH	0.0	0.0	0.0	9.7	0.0	9.7		8800	8400	■					
OH70 3	04-100 – AUGLAIZE RIVER (OTTAWA RIVER TO BLANCHARD RIV	7.10	WWH	0.0	0.0	0.0	7.1	0.0	7.1		8800	8500	■					
OH70 5	04-100 – AUGLAIZE RIVER (JENNINGS CREEK TO OTTAWA RIVE	13.70	EWH	0.0	0.0	13.7	0.0	0.0	7.3		8800	8500	■					
OH70 12	04-100 – AUGLAIZE RIVER (SIXMILE CREEK TO JENNINGS CRE	15.30	EWH	0.0	0.0	1.7	13.6	0.0	15.3		8800	8500	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH74 2.1												■						
OH75 4.1																		
OH75 16.3						●						■						
OH75 16.1																		
OH75 16.21												■						
OH75 18.1																		
OH73 1.1						●						■						
OH75 22.1						■												
OH73 16.1					●	■						▲						
OH70 1					●						▲	●			■			
OH70 3						■						■						
OH70 5						■						■						
OH70 12						■						■						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH74 2.1		■																																		
OH75 4.1																																				
OH75 16.3																																				■
OH75 16.1																																				
OH75 16.21																																				■
OH75 18.1																																				
OH73 1.1																																				■
OH75 22.1		■					●																													
OH73 16.1																																				■
OH70 1		●					▲			●																										
OH70 3	■	■					▲																													
OH70 5	■	●					▲																													
OH70 12	■	●					▲																								■					

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH70 13	04-100 – AUGLAIZE RIVER (TWOMILE CREEK TO AUGLAIZE RIV	10.00	EWH	0.0	0.0	8.8	1.2	0.0	10.0		8800	8500	■					
OH70 17	04-100 – AUGLAIZE RIVER (PUSHETA CREEK TO TWOMILE CREE	11.30	WWH	11.3	0.0	0.0	0.0	0.0	0.0	Y	8800	8000			■			
OH70 20	04-100 – AUGLAIZE RIVER (BLACKHOOF CREEK TO PUSHETA CR	9.50	WWH	9.5	0.0	0.0	0.0	0.0	0.0	Y	8800	8000			■			
OH70 25	04-100 – AUGLAIZE RIVER (HEADWATERS TO BLACKHOOF CREEK	6.90	WWH	0.0	0.0	1.0	5.9	0.0	6.9		8800	8300				■		
OH71 1	04-100 – AUGLAIZE RIVER (FLATROCK CREEK TO MAUMEE RIVE	11.10	WWH	0.0	0.0	6.6	4.5	0.0	11.1	Y	8800	8400	■					
OH71 19	04-100 – AUGLAIZE RIVER (L. AUGLAIZE R. TO FLATROCK CR	5.40	WWH	0.0	0.0	0.0	5.4	0.0	5.4		8800	8400	■					
OH71 15	04-109 – FLATROCK CREEK (WILDCAT CREEK TO AUGLAIZE RIV	23.60	WWH	0.0	0.0	0.0	0.5	23.1	0.5		8800	8400	■					
OH71 16	04-109 – FLATROCK CREEK (OH./IND. BORDER TO WILDCAT CR	10.50	WWH	0.5	0.0	0.0	0.0	10.0	0.0		8800	7900			■			
OH71 2	04-110 – POWELL CREEK	19.60	WWH	0.0	0.0	0.0	0.5	19.1	0.5		8800	8300	■					
OH71 4	04-112 – NORTH POWELL CREEK	13.00	WWH	0.5	0.0	0.0	0.0	12.5	0.0		8800	8400	■					
OH71 6	04-114 – SOUTH POWELL CREEK	15.50	WWH	0.0	0.0	0.0	3.6	11.9	3.6		8800	8400	■					
OH71 17	04-115 – WILDCAT CREEK	5.30	WWH	0.5	0.0	0.0	0.0	4.8	0.0		8800	7900			■			
OH71 20	04-120 – BLUE CREEK (CUNNINGHAM CREEK TO AUGLAIZE RIVE	16.30	WWH	0.1	0.0	1.1	0.0	15.1	1.1		8800	8400				■		

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH70 13												■						
OH70 17																		
OH70 20																		
OH70 25											▲				■			
OH71 1												●		■	●			
OH71 19					●						▲	●		■	●			
OH71 15											●	■		▲				
OH71 16																		
OH71 2											▲	●		■				
OH71 4											■	●		●	▲			
OH71 6			▲			●					●	●			■			
OH71 17																		
OH71 20											▲	●			■			

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH70 13						▲																									■					
OH70 17																																				
OH70 20																																				
OH70 25						▲																		■												
OH71 1	●					▲		■						●															●							
OH71 19	●					▲																		●			■									
OH71 15	■					●																		▲												
OH71 16																																				
OH71 2						●																▲														■
OH71 4						▲		●																											■	
OH71 6	●					▲																		■											●	
OH71 17																																				
OH71 20						▲																		■												

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH70 14	04-128 – SIXMILE CREEK	6.00	WWH	0.0	0.0	0.0	6.0	0.0	6.0		8800	8500	■					
OH69 1	04-130 – LITTLE AUGLAIZE R. (DOG CREEK TO AUGLAIZE RIV	10.00	WWH	3.9	0.0	2.0	1.4	2.7	3.4		8800	8300	■					
OH69 20	04-130 – LITTLE AUGLAIZE RIVER (EVANS DITCH TO DOG CRE	25.40	WWH	7.1	0.0	3.6	14.7	0.0	18.3		8800	8300	■					
OH69 25	04-130 – LITTLE AUGLAIZE RIVER (HEADWATERS TO EVANS DI	9.60	WWH	0.0	0.0	0.0	9.6	0.0	9.6		8800	8300	■					
OH69 2	04-131 – PRAIRIE CREEK (HAGERMAN CR. TO LITTLE AUGLAIZ	11.10	WWH	0.0	0.0	0.0	11.1	0.0	11.1		8800	8300	■					
OH69 9	04-131 – PRAIRIE CREEK (HEADWATERS TO HAGERMAN CREEK)	13.90	WWH	2.8	0.0	0.0	11.1	0.0	11.1		8800	8300	■					
OH69 3	04-132 – WEST BRANCH (HOAGLIN CREEK TO PRAIRIE CREEK)	6.00	WWH	0.0	0.0	0.0	6.0	0.0	6.0		8800	8300	■					
OH69 8	04-137 – HAGERMAN CREEK	18.00	WWH	1.0	0.0	0.0	17.0	0.0	17.0		8800	8300	■					
OH69 10	04-138 – DRY CREEK	4.30	WWH	0.0	0.0	0.0	2.8	1.5	2.8		8800	8300		■				
OH69 11	04-139 – MIDDLE CREEK (MADDOX/TOWN CR. TO L. AUGLAIZE	9.50	WWH	0.0	0.0	0.5	0.0	9.0	0.5		8800	8300		■				
OH69 15	04-143 – TOWN CREEK	26.30	WWH	0.0	0.0	8.6	14.8	2.9	23.4		8800	8300	■					
OH69 17	04-145 – DOG CREEK	23.80	WWH	0.0	0.0	0.0	23.8	0.0	23.8		8800	8300	■					
OH69 27	04-153 – LONG PRAIRIE CREEK	8.80	WWH	1.6	0.0	0.0	7.2	0.0	7.2		8800	8300	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH70 14					■	■						■						
OH69 1											●			■	■			
OH69 20		▲				●					●	●		■	■			
OH69 25											●	▲		■	■			
OH69 2											▲				■			
OH69 9											▲				■			
OH69 3					●	■						■			■			
OH69 8						■						■			■			
OH69 10						■						■						
OH69 11										■								
OH69 15					●	●						●		■	■			
OH69 17											●				■			
OH69 27						■						■			■			

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Talings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulatbn	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH70 14	■	●												▲																						
OH69 1							▲																		■			■	■							■
OH69 20		▲					●																		■			■	■							
OH69 25							●																		■			■	■							■
OH69 2							▲																		■											
OH69 9							▲																		■											
OH69 3							▲														●	■			■											
OH69 8		■					▲																		■											
OH69 10							▲															■										■				
OH69 11		■					●																													●
OH69 15	●	●												●											■											●
OH69 17							●																		■											
OH69 27		■					▲																		■											

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH71 20.2	04-158 – ZIELKE DITCH	5.00	WWH	1.1	0.0	0.0	0.0	3.9	0.0		8800	8400		■				
OH69 20.1	04-159 – EVANS DITCH	3.10	LRW	2.2	0.0	0.0	0.9	0.0	0.0		8800	8600		■				
OH66 18	04-160 – BLANCHARD (THE OUTLET TO POTATO RUN)	14.70	WWH	0.0	0.0	2.3	12.4	0.0	14.7		8800	8300	■					
OH66 21	04-160 – BLANCHARD RIVER (HEADWATERS TO THE OUTLET)	7.10	WWH	0.0	0.0	1.3	5.8	0.0	7.1	Y	8800	8300	■					
OH67 1	04-160 – BLANCHARD RIVER (CRANBERRY CREEK TO AUGLAIZE	17.30	WWH	0.0	0.0	0.0	17.3	0.0	17.3	Y	8800	8300		■				
OH67 6	04-160 – BLANCHARD RIVER (RILEY CREEK TO CRANBERRY CRE	12.80	WWH	0.0	0.0	12.8	0.0	0.0	12.8	Y	8800	8300	■					
OH66 10	04-160 – BLANCHARD (THE OUTLET TO EAGLE CREEK)	5.50	WWH	5.0	0.0	0.0	0.0	0.5	0.5		9002	8909	■					
OH66 3	04-160 – BLANCHARD (EAGLE CREEK TO OTTAWA CREEK)	12.50	WWH	0.0	0.0	8.9	3.6	0.0	12.1		9002	8909	■					
OH67 20	04-160 – BLANCHARD RIVER (OTTAWA CREEK TO RILEY CREEK)	15.60	WWH	8.0	0.0	7.6	0.0	0.0	7.6		9002	8909	■					
OH66 13	04-160 – BLANCHARD RIVER (POTATO RUN TO THE OUTLET)	12.60	WWH	12.6	0.0	0.0	0.0	0.0	0.0		9002	8909	■					
OH67 10	04-168 – RILEY CREEK (LITTLE RILEY CREEK TO BLANCHARD	15.30	WWH	0.5	0.0	0.0	0.0	14.8	0.0	Y	8800	8300		■				
OH67 12	04-168 – RILEY CREEK (HEADWATERS TO LITTLE RILEY CREEK	9.70	WWH	0.5	0.0	0.0	0.0	9.2	0.0		8800	8300		■				
OH67 11	04-169 – CRANBERRY RUN	8.70	WWH	0.5	0.0	0.0	0.0	8.2	0.0	Y	8800	8300		■				

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH71 20.2												■						
OH69 20.1					■							■						
OH66 18											●	■						
OH66 21											▲	■			●			
OH67 1					●							■			●			
OH67 6					●						●	■			▲			
OH66 10															■			
OH66 3					●				■		●	■			■	●		
OH67 20									■		●	■						
OH66 13																		
OH67 10																		
OH67 12																		
OH67 11					●	●						■						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH71 20.2																						■														
OH69 20.1	■																					■														
OH66 18						■																▲														
OH66 21						■																●		●												
OH67 1		●				▲																												■		
OH67 6		●				▲																												■		
OH66 10																										■										
OH66 3	●	■		■	●									●										■		■										
OH67 20		■		■										●																				●		
OH66 13																																				
OH67 10																																				
OH67 12																																				
OH67 11																																				■

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH66 1	04-183 – OTTAWA CREEK	17.80	WWH	0.0	0.0	0.0	0.5	17.3	0.5	Y	8800	8300			■			
OH66 2	04-184 – TIDERISHI CREEK	9.50	WWH	9.5	0.0	0.0	0.0	0.0	0.0		8800	8300		■				
OH66 5	04-185 – EAGLE CREEK	18.50	WWH	1.1	0.0	5.2	7.7	4.5	12.9	Y	8800	8300	■					
OH66 6	04-186 – BUCK RUN	1.70	WWH	0.5	0.0	0.0	0.0	1.2	0.0		8800	8400			■			
OH66 19	04-196 – POTATO RUN	10.00	WWH	0.0	0.0	0.0	0.5	9.5	0.5	Y	8800	8300			■			
OH66 22	04-198 – THE OUTLET (UPSTREAM)	3.50	WWH	0.5	0.0	0.0	0.0	3.0	0.0		8800	8400			■			
OH68 1	04-200 – OTTAWA RIVER (SUGAR CREEK TO AUGLAIZE RIVER)	6.60	WWH	0.0	0.0	0.0	6.6	0.0	6.6		8800	8700	■					
OH68 8	04-200 – OTTAWA RIVER (HONEY RUN TO SUGAR CREEK)	16.30	WWH	0.0	0.0	0.0	16.3	0.0	16.3		8800	8700	■					
OH68 11	04-200 – OTTAWA RIVER (LITTLE OTTAWA RIVER TO HONEY RU	12.40	WWH	0.0	0.0	0.0	12.4	0.0	12.4	Y	8800	8700	■					
OH68 17	04-200 – OTTAWA RIVER (HOG CREEK TO LITTLE OTTAWA RIVE	15.40	WWH	1.7	0.0	0.1	13.6	0.0	13.7		8800	8700	■					
OH68 2	04-201 – PLUM CREEK	14.40	WWH	0.0	0.0	0.0	14.4	0.0	14.4		8800	7900			■			
OH68 4	04-203 – SUGAR CREEK	28.90	WWH	0.0	5.4	8.1	15.4	0.0	23.5		8800	8500	■					
OH68 9	04-207 – LEATHERWOOD DITCH	4.00	WWH	1.0	0.0	0.0	3.0	0.0	3.0		8800	8300				■		

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH66 1												▲	■		●					■				▲																			▲													
OH66 2																																																								
OH66 5												●	■							■				●																																	
OH66 6																																																								
OH66 19						■			▲				●																			●								■															
OH66 22																																																								
OH68 1	●												■						■	■																																				
OH68 8	■					▲							■						■	■																																				
OH68 11	■					●							●						■	■		●																																		
OH68 17	■					●							●	●	●				■	■		●																							●	●									
OH68 2													■							■				▲								■																								
OH68 4	■												■		■				■					▲																															■	
OH68 9						■							■											■						■													▲												

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH68 16	04-213 – LITTLE OTTAWA RIVER	6.40	WWH	6.4	0.0	0.0	0.0	0.0	0.0	Y	8800	8300			■			
OH68 18	04-214 – LOST CREEK	4.70	WWH	0.0	0.0	0.0	4.7	0.0	4.7		9002	8809		■				
OH66 4	04-224 – OIL DITCH	5.00	LRW	0.0	0.0	0.0	5.0	0.0	0.0		8800	8700	■					
OH68 4.2	04-225 – TRIB. TO SUGAR CREEK	2.00	WWH	0.0	0.0	0.0	2.0	0.0	2.0		8800	8500	■					
OH69 1.1	04-226 – UNNAMED TRIBUTARY @RM 0.93	3.00	WWH	0.0	0.0	0.0	3.0	0.0	3.0		8800	8600			■			
OH69 20.2	04-227 – TRIB. TO LITTLE AUGLAIZE RIVER (RM 31.7)	3.00	WWH	0.5	0.0	0.0	0.0	2.5	0.0		8800	8700			■			
OH68 11.1	04-228 – MCBRIDE DITCH	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7900			■			
OH68 2.1	04-229 – TRIB. TO PLUM CREEK (RM 7.3)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7900			■			
OH70 7	04-230 – JENNINGS CREEK	14.50	WWH	0.0	0.0	3.3	11.2	0.0	14.5		9002	8810	■					
OH70 8	04-231 – FLAT FORK	9.60	WWH	0.0	0.0	0.0	9.6	0.0	9.6		9002	8810	■					
OH70 18	04-235 – PUSHETA CREEK	13.70	WWH	13.7	0.0	0.0	0.0	0.0	0.0		8800	8000			■			
OH70 24	04-240 – HUFFMAN CREEK	3.30	WWH	1.4	0.0	0.0	0.0	1.9	0.0		8800	8700		■				
OH68 4.3	04-244 – TRIB. TO SUGAR CREEK (21.9)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7900			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH68 16																		
OH68 18									●					●				■
OH66 4	■											■				■		
OH68 4.2	■				■	●						■						
OH69 1.1						●						■						
OH69 20.2																		
OH68 11.1																		
OH68 2.1																		
OH70 7	▲										▲	■						
OH70 8												■		■				
OH70 18																		
OH70 24																		
OH68 4.3																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Talings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH68 16																																				
OH68 18	●													●																●						■
OH66 4	■																																			
OH68 4.2	■																															■	■			
OH69 1.1						■																														
OH69 20.2																																				
OH68 11.1																																				
OH68 2.1																																				
OH70 7	●			■		▲																▲														
OH70 8				■																		▲		■											●	
OH70 18																																				
OH70 24																																				
OH68 4.3																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Biosurvey-A	Intensive Biosurvey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH68 16.1	04-245 – CRIDERSVILLE TRIBUTARY	2.00	WWH	0.0	0.0	0.0	0.5	1.5	0.5	Y	8800	7800			■			
OH68 17.2	04-246 – TRIB. TO OTTAWA RIVER (RM 41.5)	2.00	WWH	0.0	0.0	0.5	0.0	1.5	0.5		8800	8600			■			
OH66 3.1	04-247 – AURAND RUN	3.00	WWH	0.5	0.0	0.0	0.0	2.5	0.0		8800	8300			■			
OH66 23	04-248 – SHALLOW RUN	5.00	WWH	0.0	0.0	0.0	5.0	0.0	5.0	Y	8800	8300			■			
OH68 18.1	04-249 – TRIB. TO LOST CREEK	4.70		0.0	0.0	0.0	0.5	4.2	0.5		9002	8809		■				
OH67 6.1	04-250 – TRIB. TO BLANCHARD RIVER (RM 21.5)	3.00	WWH	0.0	0.0	0.0	3.0	0.0	3.0		8800	8400			■			
OH66 4.1	04-251 – COOPER TIRE DITCH TO OIL DITCH (FINDLAY)	2.00	LRW	0.0	0.0	0.0	0.5	1.5	0.5		8800	8000			■			
OH75 16	04-300 – OTTAWA RIVER (TENMILE CREEK TO LAKE ERIE)	19.80	WWH	0.0	0.0	0.0	19.8	0.0	19.8	Y	8800	8600	■					
OH75 18	04-320 – TENMILE CREEK (HEADWATERS TO OTTAWA RIVER)	34.80	WWH	0.0	0.0	1.2	3.0	30.6	4.2	Y	8800	8600	■					
OH65 21	04-400 – ST. JOSEPH RIVER (FISH CREEK TO OH/IND. BORDE	11.20	WWH	0.0	0.0	0.5	0.0	10.7	0.5	Y	8800	7800			■			
OH65 37	04-400 – ST. JOSEPH RIVER (HEADWATERS TO NETTLE CREEK)	9.60	WWH	0.5	0.0	0.0	0.0	9.1	0.0		8800	7800			■			
OH65 34	04-411 – EAGLE CREEK (HEADWATERS TO ST. JOSEPH RIVER)	15.70	WWH	0.5	0.0	0.5	0.0	14.7	0.5		8800	8400				■		
OH65 36	04-413 – NETTLE CREEK (HEADWATERS TO ST. JOSEPH RIVER)	13.70	WWH	0.0	0.0	0.5	0.0	13.2	0.5		8800	8500			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH68 16.1												■						
OH68 17.2					■													
OH66 3.1																		
OH66 23						●						■						
OH68 18.1											●							■
OH67 6.1												■						
OH66 4.1						■						■						
OH75 16	●		■								●	●			●			
OH75 18												■			●			
OH65 21					■													
OH65 37																		
OH65 34					●							■						
OH65 36					■							▲						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH68 16.1		■																																		
OH68 17.2	■																																			
OH66 3.1																																				
OH66 23																						■														
OH68 18.1														●								●														■
OH67 6.1		■																																		
OH66 4.1																						■														
OH75 16	●						▲							●									■										●			
OH75 18														■		●						▲			●											
OH65 21	■																																			
OH65 37																																				
OH65 34	■						▲																													
OH65 36	■						▲																													

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

09/05/90

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH65 38	04-418 – JOHN LATTANER DITCH	4.00	LRW	0.0	0.0	0.0	4.0	0.0	0.0		8800	8500		■				
OH64 7	04-500 – ST. MARYS RIVER (TWELVEMILE CREEK TO BLACK CR	24.70	WWH	0.5	0.0	0.0	0.0	24.2	0.0		8800	8600		■				
OH64 18	04-500 – ST. MARYS RIVER (MIAMI/ERIE CANAL TO SIXMILE	11.00	WWH	0.0	0.0	0.0	11.0	0.0	11.0	Y	8800	8000		■				
OH64 25	04-500 – ST. MARYS RIVER (GRAND LAKE TO ST. MARYS)	1.80	WWH	0.0	0.0	0.0	1.8	0.0	1.8	Y	8800	8000		■				
OH64 4	04-503 – BLACK CREEK	11.80	WWH	0.0	0.0	0.0	0.5	11.3	0.5		8800	8400	■					
OH64 12	04-510 – TWELVEMILE CREEK	13.40	WWH	0.0	0.0	0.0	2.2	11.2	2.2		8800	8300	■					
OH64 30	04-518 – CENTER BRANCH	7.00	WWH	0.0	0.0	0.0	7.0	0.0	7.0		8800	8700	■					
OH64 31	04-519 – CARTER CREEK	9.00	WWH	0.0	0.0	0.0	0.5	8.5	0.5		8800	8400				■		
OH64 26	04-524 – KOPP CREEK	12.00	WWH	0.0	0.0	0.0	12.0	0.0	12.0	Y	8800	8100	■					
OH64 27	04-525 – WIERTH DITCH	5.00	WWH	0.0	0.0	0.0	5.0	0.0	5.0	Y	8800	8100	■					
OH64 28	04-526 – UNNAMED TRIBUTARY (RM 5.4)	3.00	WWH	0.0	0.0	0.0	3.0	0.0	3.0		8800	8100	■					
OH72 1	04-600 – TIFFIN RIVER (LICK CREEK TO MAUMEE RIVER)	8.20	WWH	0.6	0.0	5.6	2.0	0.0	7.6		8800	8400	■					
OH72 16	04-600 – TIFFIN RIVER (LEATHERWOOD CREEK TO LICK CREEK	28.20	WWH	0.0	0.0	12.8	15.4	0.0	28.2		8800	8400	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH65 38					●							■			▲			
OH64 7																		
OH64 18					■	●						●			▲			
OH64 25					●							■						
OH64 4											●	▲			■			
OH64 12											▲	■			●			
OH64 30												●			■			
OH64 31											▲	■			●			
OH64 26						●					●	■			■			
OH64 27						●						■			■			
OH64 28											●	■						
OH72 1					▲						■				●			
OH72 16											●	●			■			

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH65 38	■																								●											
OH64 7																																				
OH64 18		■				●																▲			▲											
OH64 25		■					▲															▲														
OH64 4							▲															▲			■											
OH64 12							■															▲			▲											
OH64 30		●																							■											
OH64 31							■																		●											
OH64 26	■	■				●			●																■							●				
OH64 27	●	■				●																			■											
OH64 28						●			■																											
OH72 1	▲						■																		●											
OH72 16							■																		●											

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

09/05/90

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH72 6	04-605 – MUD CREEK	12.00	WWH	1.0	0.0	0.1	2.1	8.8	2.2		8800	8400				■		
OH72 10	04-609 – LICK CREEK (LITTLE LICK CREEK TO TIFFIN RIVER	10.10	WWH	0.0	0.0	0.0	10.1	0.0	10.1		8800	8400	■					
OH72 13	04-609 – LICK CREEK (HEADWATERS TO LITTLE LICK CREEK)	14.90	WWH	0.0	0.0	0.9	0.0	14.0	0.9		8800	8400	■					
OH72 18	04-614 – BRUSH CREEK (HEADWATERS TO TIFFIN RIVER)	21.40	WWH	0.0	0.0	0.0	21.4	0.0	21.4	Y	8800	8400	■					
OH72 19	04-615 – OWL CREEK	3.20	WWH	0.5	0.0	0.0	0.0	2.7	0.0		8800	8300				■		
OH72 21	04-617 – BEAVER CREEK	23.00	WWH	0.5	0.0	0.0	0.0	22.5	0.0		8800	8300				■		
OH72 33	04-628 – DEER CREEK	7.00	WWH	0.5	0.0	0.0	0.0	6.5	0.0		8800	7900			■			
OH72 35	04-630 – SPRING CREEK	3.40	WWH	0.5	0.0	0.0	0.0	2.9	0.0		8800	7900			■			
OH72 11	04-633 – PRAIRIE CREEK	15.00	WWH	0.0	0.0	0.0	12.1	2.9	12.1	Y	8800	8400	■					
OH72 11.6	04-634 – TRIB. TO PRAIRIE CREEK (RM 11.3)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7900			■			
OH72 33.1	04-635 – TRIB. TO DEER CREEK (RM 5.9)	3.00	WWH	0.5	0.0	0.0	0.0	2.5	0.0		8800	7900			■			
OH72 11.8	04-636 – Unnamed tributary	4.50		0.5	0.0	0.0	0.0	4.0	0.0	Y	8800	8400			■			
OH72 21.1	04-637 – TRIB. TO BEAVER CREEK (RM 14.2)	2.00	WWH	0.0	0.0	0.0	0.5	1.5	0.5		8800	8400			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH72 6											▲	●			■			
OH72 10											▲	■			●			
OH72 13											▲	■			●			
OH72 18											▲	■			●			
OH72 19											▲	■			●			
OH72 21																		
OH72 33																		
OH72 35																		
OH72 11					■		●				▲	●			●			
OH72 11.6																		
OH72 33.1																		
OH72 11.8							●		●		▲	■						
OH72 21.1							●				▲	■						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH72 6						■																		■												
OH72 10						■																		●												
OH72 13						■																		▲												
OH72 18	■					●																		▲												
OH72 19						■																		■												
OH72 21																																				
OH72 33																																				
OH72 35																																				
OH72 11	■	■				▲								●										●												
OH72 11.6																																				
OH72 33.1																																				
OH72 11.8	■					●								●								▲		●												
OH72 21.1	■					●								●								▲		●												

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH72 29.1	04-638 – TRIB. TO HARRISON LAKE	4.00	WWH	0.5	0.0	3.5	0.0	0.0	3.5		8800	8500		■				
OH72 11.7	04-639 – TRIB. TO PRAIRIE CREEK (RM 11.0)	2.00	WWH	0.0	0.0	0.0	0.5	1.5	0.5		8800	8400		■				
OH04-999	04-999 – MIAMI-ERIE CANAL	60.00	WWH	0.0	0.0	0.0	4.6	55.4	4.6		8800	8400	■					
OH80 1	05-001 – SANDUSKY RIVER (ROCK RUN TO TYMOCHTEE CREEK)	11.70	WWH	0.0	0.0	2.1	9.6	0.0	11.7		8800	7900	■					
OH80 9	05-001 – SANDUSKY RIVER (BROKEN SWORD CREEK TO ROCK RU	17.10	WWH	5.5	0.0	6.7	4.9	0.0	11.6	Y	8800	7900	■					
OH80 17	05-001 – SANDUSKY RIVER (UNNAMED TRIB. TO BROKEN SWORD	21.80	WWH	0.0	0.0	4.5	17.3	0.0	21.8	Y	8800	7900	■					
OH80 20	05-001 – SANDUSKY RIVER (HEADWATERS TO UNNAMED TRIB.)	13.60	WWH	0.0	0.0	3.4	10.2	0.0	13.6		8800	7900	■					
OH81 23	05-001 – SANDUSKY RIVER (SYCAMORE CREEK TO BELLS RUN)	14.80	WWH	0.0	1.1	11.5	2.2	0.0	13.7		8800	8100	■					
OH82 1	05-001 – SANDUSKY RIVER (WOLF CREEK TO LAKE ERIE)	22.70	WWH	0.2	0.0	12.9	9.6	0.0	22.5		9002	8809	■					
OH81 1	05-001 – SANDUSKY RIVER (BELLS RUN TO WOLF CREEK)	20.30	WWH	18.6	0.0	1.7	0.0	0.0	1.7		9002	8809		■				
OH82 14	05-004 – INDIAN CREEK	7.50	WWH	7.5	0.0	0.0	0.0	0.0	0.0	Y	8800	8100		■				
OH82 15	05-005 – WOLF CREEK	23.90	WWH	18.4	0.0	0.0	5.5	0.0	5.5		8800	8400		■				
OH81 2	05-010 – SUGAR CREEK	10.40	WWH	1.1	0.0	2.2	0.1	7.0	2.3		9002	8903	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH72 29.1																		
OH72 11.7					■													
OH04-999											●	●		▲	■			
OH80 1											●	■						
OH80 9												■						
OH80 17					▲	●	▲					■						
OH80 20						●					●	■						
OH81 23											●	■			●			
OH82 1											■			■	●			
OH81 1														■				
OH82 14																		
OH82 15												■						
OH81 2			■															

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Talings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulatbn	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH72 29.1																																				
OH72 11.7	■	●												●																						
OH04-999		●																				■			■		▲									
OH80 1		■				●																														
OH80 9		■												●																						
OH80 17		■												■																						
OH80 20		■				●								■								▲														
OH81 23						■								▲												●										
OH82 1						■																				●	■									
OH81 1																																				
OH82 14																																				
OH82 15						▲																■														
OH81 2	■																																			

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH81 5	05-013 – WILLOW CREEK	5.00	WWH	5.0	0.0	0.0	0.0	0.0	0.0		8800	8200		■				
OH81 6	05-014 – ROCK CREEK	19.60	WWH	19.6	0.0	0.0	0.0	0.0	0.0		8800	8200		■				
OH80 22	05-042 – PARAMOUR CREEK	9.60	WWH	0.0	0.0	0.2	9.4	0.0	9.6	Y	8800	8500	■					
OH83 11	05-045 – RACCOON CREEK	14.90	WWH	0.0	0.0	3.0	11.9	0.0	11.9	Y	8800	8600	■					
OH83 7	05-046 – PICKEREL CREEK	7.20	WWH	0.0	0.0	6.2	1.0	0.0	7.2		8800	8300	■					
OH83 3	05-051 – MILLS CREEK	11.70	WWH	0.0	0.0	0.0	11.7	0.0	11.7		8800	8500	■					
OH83 1	05-052 – PIPE CREEK	12.00	WWH	0.0	0.0	1.5	1.1	9.4	2.6		8800	8300	■					
OH83 11.1	05-053 – LITTLE RACCOON CREEK	4.90	WWH	1.5	0.0	0.0	3.4	0.0	3.4		8800	8300	■					
OH83 11.2	05-054 – BUCK RUN	5.00	WWH	0.5	0.0	0.0	4.5	0.0	4.5		8800	8300	■					
OH80 23	05-055 – CRESTLINE WWTP TRIBUTARY	4.00	WWH	0.0	0.0	0.0	4.0	0.0	4.0		8800	8500	■					
OH80 24	05-056 – CRESTLINE TRIBUTARY	4.00	WWH	0.0	0.0	0.0	4.0	0.0	4.0	Y	8800	8500	■					
OH83 3.4	05-057 – SNYDERS DITCH	6.00	WWH	0.0	0.0	0.0	6.0	0.0	6.0	Y	8800	8400	■					
OH83 3.3	05-058 – CASWELL DITCH	4.00	WWH	0.0	0.0	4.0	0.0	0.0	4.0		8800	8500	■					

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH81 5																																																							
OH81 6																																																							
OH80 22				●		■						●	■		■	▲				■				●								●											■												
OH83 11				●									■						■	●										▲										▲														
OH83 7												●			■									▲		■																													
OH83 3				●		■							■						■	■							▲																								●				
OH83 1				●								●			■				●					▲								▲											■								●				
OH83 11.1													▲	■																									▲																■
OH83 11.2		■																							■																														
OH80 23				●		●							■						■													●																				■			
OH80 24				●								●			●	■			■													■											●				●				■			
OH83 3.4				●		■							■							■																															■			
OH83 3.3				■																																																			■

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH80 22.1	05-059 – PPG TRIB. TO PARAMOUR CREEK	5.00	WWH	3.4	0.0	0.0	1.6	0.0	1.6		8800	8500	■					
OH80 13.1	05-060 – TRIB. TO BROKEN SWORD CREEK (NEVADA)	2.00	WWH	0.0	0.0	0.0	2.0	0.0	2.0		8800	8600		■				
OH82 2	05-100 – GREEN CREEK	19.80	CWH	19.8	0.0	0.0	0.0	0.0	0.0		8800	8300		■				
OH81 11	05-200 – HONEY CREEK (SILVER CREEK TO SANDUSKY RIVER)	14.50	WWH	14.5	0.0	0.0	0.0	0.0	0.0	Y	8800	8400			■			
OH81 13	05-200 – HONEY CREEK (BROKEN KNIFE CREEK TO SILVER CRE	18.00	WWH	0.0	0.0	0.0	18.0	0.0	18.0		8800	8400			■			
OH81 21	05-200 – HONEY CREEK (HEADWATERS TO BROKEN KNIFE CREEK	7.50	WWH	1.1	0.0	6.4	0.0	0.0	6.4		8800	8300			■			
OH81 22	05-209 – BROKENKNIFE CREEK	7.50	WWH	7.5	0.0	0.0	0.0	0.0	0.0		8800	8600		■				
OH81 22.1	05-210 – TRIB. TO BROKENKNIFE CREEK (NEW WASH.)	2.00	WWH	0.0	0.0	0.0	2.0	0.0	2.0		8800	8600		■				
OH82 21	05-219 – MUDDY CREEK (GRIES DITCH TO SANDUSKY BAY)	20.10	WWH	2.8	0.0	11.1	6.2	0.0	17.3	Y	8800	8200	■					
OH82 23	05-219 – MUDDY CREEK (HEADWATERS TO GRIES DITCH)	19.90	WWH	15.5	0.0	3.2	0.0	1.2	3.2		8800	8400	■					
OH82 21.1	05-223 – GRIES DITCH	3.00	WWH	0.0	0.0	3.0	0.0	0.0	3.0		8800	8400			■			
OH79 9	05-300 – TYMOCHTEE CREEK (WARPOLE CR. TO L. TYMOCHTEE	21.40	WWH	0.0	0.0	1.1	20.3	0.0	21.4		8800	7900	■					
OH 8 78	06-013 – LEITH RUN	8.40	WWH	0.5	0.0	0.5	0.0	7.4	0.0		9002	8809		■				

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modifcation	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH80 22.1												●			■			
OH80 13.1												■						
OH82 2																		
OH81 11																		
OH81 13	■																	
OH81 21															■			
OH81 22																		
OH81 22.1												■						
OH82 21						●					▲	■			▲			
OH82 23												▲			■			
OH82 21.1														■				
OH79 9											●				■			
OH 8 78															■			

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewr Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Talings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH80 22.1						■																														
OH80 13.1																																				■
OH82 2																																				
OH81 11																																				
OH81 13						■																														
OH81 21						▲																		■												
OH81 22																																				
OH81 22.1																																				■
OH82 21	■					●																		▲												
OH82 23						▲								▲										■			●									
OH82 21.1																																				■
OH79 9						●																														
OH 8 78																										■										

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH 8 81	06-015 – COLLINS RUN	2.00	WWH	0.0	0.0	0.9	0.0	1.1	0.9		8800	8600			■			
OH 8 89	06-022 – NARROWS RUN	3.40	WWH	0.5	0.0	0.0	0.0	2.9	0.0		8800	8300			■			
OH 7 17	06-045 – BIG RUN	4.60	LWH	0.0	0.0	0.0	4.6	0.0	4.6		8800	8300	■					
OH 7 46	06-046 – LITTLE CAPTINA CREEK	3.30	WWH	0.5	0.0	0.0	0.0	2.8	0.0		8800	8300			■			
OH 7 47	06-047 – PIPE CREEK	7.20	LRW	7.2	0.0	0.0	0.0	0.0	0.0		8800	8300	■					
OH 7 48	06-048 – BIG RUN	4.50	LWH	0.0	0.0	0.0	4.5	0.0	4.5		8800	8300	■					
OH 7 50	06-049 – WEGEE CREEK	7.60	LRW	0.0	0.0	0.0	7.6	0.0	0.0		8800	8300	■					
OH 6 49	06-058 – DEEP RUN	5.50	WWH	0.0	0.0	0.0	0.5	5.0	0.5		9002	8808			■			
OH 5 24	06-066 – WILLS CREEK	6.20	CWH	2.2	0.0	2.8	1.2	0.0	4.0		8800	8300	■					
OH 5 27	06-069 – NORTH FORK WILLS CREEK	5.50	CWH	0.0	5.5	0.0	0.0	0.0	0.0		8800	8300			■			
OH 5 29	06-070 – ISLAND CREEK	9.90	CWH	9.9	0.0	0.0	0.0	0.0	0.0		8800	8300			■			
OH 5 24.2	06-083 – TRIB. TO WILLS CREEK	1.20	WWH	1.2	0.0	0.0	0.0	0.0	0.0		8800	8300	■					
OH 5 29.1	06-084 – MELLWOOD ACRES. TRIB.	1.00	CWH	0.5	0.0	0.0	0.0	0.5	0.0		8800	8300			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH 8 81												■						
OH 8 89																		
OH 7 17														■				
OH 7 46																		
OH 7 47										■	■							
OH 7 48										■	■							
OH 7 50										■	■							
OH 6 49										■								
OH 5 24											■							
OH 5 27																		
OH 5 29																		
OH 5 24.2																		
OH 5 29.1																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH 8 81		■																																		
OH 8 89																																				
OH 7 17																																				■
OH 7 46																																				
OH 7 47															■																					
OH 7 48															■																					
OH 7 50															■																					
OH 6 49															■																					
OH 5 24															■																					
OH 5 27																																				
OH 5 29																																				
OH 5 24.2																																				
OH 5 29.1																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Biosurvey-A	Intensive Biosurvey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH 5 24.1	06-085 – WINTERSVILLE "C" TRIB.	1.00	WWH	0.5	0.0	0.0	0.0	0.5	0.0		8800	8300			■			
OH 7 18	06-100 – CAPTINA CREEK (BEND FORK TO OHIO RIVER)	18.00	EWH	0.0	17.4	0.6	0.0	0.0	0.6		8800	8300	■					
OH 7 28	06-100 – CAPTINA CREEK (N/S FORKS TO BEND FORK)	7.40	EWH	7.4	0.0	0.0	0.0	0.0	0.0		8800	8300	■					
OH 7 19	06-101 – CAT RUN	7.20	WWH	0.0	2.2	0.0	5.0	0.0	5.0		8800	8300	■					
OH 7 20	06-102 – MOORE RUN	4.00	WWH	4.0	0.0	0.0	0.0	0.0	0.0		8800	8300			■			
OH 7 21	06-103 – PEAVINE CREEK	6.60	WWH	6.6	0.0	0.0	0.0	0.0	0.0		8800	8300			■			
OH 7 22	06-104 – ROCKY FORK	3.90	WWH	3.9	0.0	0.0	0.0	0.0	0.0		8800	8300			■			
OH 7 23	06-105 – ANDERSON RUN	4.60	WWH	4.6	0.0	0.0	0.0	0.0	0.0		8800	8300			■			
OH 7 24	06-106 – BEND FORK	13.00	WWH	10.0	0.0	0.0	3.0	0.0	3.0		8800	8300	■					
OH 7 26	06-108 – JOY FORK	5.00	WWH	5.0	0.0	0.0	0.0	0.0	0.0		8800	8300			■			
OH 7 27	06-109 – PACKSADDLE RUN	3.50	WWH	3.5	0.0	0.0	0.0	0.0	0.0		8800	8300			■			
OH 7 29	06-110 – CRABAPPLE CREEK	2.20	WWH	2.2	0.0	0.0	0.0	0.0	0.0		8800	8300			■			
OH 7 31	06-112 – LONG RUN	3.00	WWH	3.0	0.0	0.0	0.0	0.0	0.0		8800	8300			■			

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH 5 24.1																																																								
OH 7 18	●										■																						■																						
OH 7 28																																																								
OH 7 19														■																																									■	
OH 7 20																																																								
OH 7 21																																																								
OH 7 22																																																								
OH 7 23																																																								
OH 7 24											▲	■								■											▲																										
OH 7 26																																																								
OH 7 27																																																								
OH 7 29																																																								
OH 7 31																																																								

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH 7 33	06-114 – BERRYS RUN	2.30	WWH	0.0	0.0	0.0	2.3	0.0	2.3		8800	8300			■			
OH 7 35	06-116 – MIKES RUN	3.70	WWH	3.7	0.0	0.0	0.0	0.0	0.0		8800	8300			■			
OH 7 39	06-117 – SOUTH FORK CAPTINA CREEK	14.00	WWH	14.0	0.0	0.0	0.0	0.0	0.0		8800	8300			■			
OH 7 43	06-121 – MILLERS RUN	3.50	WWH	3.5	0.0	0.0	0.0	0.0	0.0		8800	8300			■			
OH 7 36	06-123 – NORTH FORK CAPTINA CREEK	11.00	EWH	2.6	0.0	0.5	7.9	0.0	8.4		8800	8300	■					
OH 7 37	06-124 – JAKES RUN	5.00	WWH	0.5	0.0	0.0	0.0	4.5	0.0		8800	8300			■			
OH 7 38	06-125 – LONG RUN	6.00	WWH	6.0	0.0	0.0	0.0	0.0	0.0		8800	8300			■			
OH 5 1	06-200 – CROSS CREEK (MCINTYRE CREEK TO OHIO R.)	5.60	WWH	2.0	0.0	2.1	1.5	0.0	3.6		8800	8300	■					
OH 5 9	06-200 – CROSS CREEK (SALEM CREEK TO MCINTYRE)	11.80	WWH	1.2	0.0	8.6	2.0	0.0	10.6		8800	8300	■					
OH 5 14	06-200 – CROSS CREEK (HEADWATERS TO SALEM CREEK)	10.00	WWH	3.1	0.0	6.9	0.0	0.0	6.9		8800	8300	■					
OH 5 2	06-201 – DRY FORK	5.60	WWH	0.0	0.0	0.0	5.6	0.0	0.0		8800	8300	■					
OH 5 12	06-203 – CEDAR LICK CREEK	5.30	WWH	2.1	0.0	0.0	3.2	0.0	3.2		8800	8300	■					
OH 5 20	06-208 – NORTH BRANCH CROSS CREEK	6.40	WWH	6.4	0.0	0.0	0.0	0.0	0.0		8800	8300	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH 7 33												■						
OH 7 35																		
OH 7 39																		
OH 7 43																		
OH 7 36												■						
OH 7 37																		
OH 7 38																		
OH 5 1					●		●				▲	■						
OH 5 9					●					■	▲	▲						
OH 5 14					●						■							
OH 5 2					●					■		■						
OH 5 12					●							■						
OH 5 20																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH 7 33																																				■
OH 7 35																																				
OH 7 39																																				
OH 7 43																																				
OH 7 36		■																																		
OH 7 37																																				
OH 7 38																																				
OH 5 1	●	■														●																				
OH 5 9		▲														■																				
OH 5 14																■																				
OH 5 2		■														■																				
OH 5 12		■																																		
OH 5 20																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Biosurvey-A	Intensive Biosurvey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH 5 10	06-209 – BARBERS HOLLOW	4.10	WWH	0.0	0.0	0.0	4.1	0.0	4.1		8800	8300	■					
OH 5 3	06-210 – MCINTYRE CREEK	12.70	WWH	0.0	0.0	0.5	12.2	0.0	12.7		8800	8300	■					
OH 5 2.1	06-216 – YELLOW BOY RUN	1.00	LRW	0.0	0.0	0.0	1.0	0.0	0.0		8800	8300	■					
OH 5 2.2	06-217 – WINTERSVILLE 'E' TRIB.	1.20	LRW	0.0	0.0	0.0	1.2	0.0	1.2		8800	8300	■					
OH 5 2.3	06-218 – WINTERSVILLE "D" TRIB.	2.00	WWH	0.0	0.0	0.0	2.0	0.0	2.0		8800	8300	■					
OH 9 2	06-300 – DUCK CREEK (E/W FORK DUCK CREEK TO OHIO R.)	24.30	LWH	0.0	0.0	24.3	0.0	0.0	0.0		8800	8400		■				
OH 9 11	06-322 – MIDDLE FORK DUCK CREEK	13.80	LWH	0.0	0.0	0.0	0.5	13.3	0.0		9002	8208			■			
OH 9 27	06-340 – WEST FORK DUCK CREEK (SALT RUN TO E FK DUCK)	23.60	LWH	13.6	0.0	10.0	0.0	0.0	0.0		8800	8700		■				
OH 9 32	06-340 – WEST FORK DUCK CREEK (HEADWATERS TO SALT RUN)	12.80	LWH	0.0	12.8	0.0	0.0	0.0	0.0		8800	8700		■				
OH 8 1	06-400 – LITTLE MUSKINGUM R. (FIFTEENMILE C TO OHIO R)	14.80	WWH	14.8	0.0	0.0	0.0	0.0	0.0		8800	8100				■		
OH 8 15	06-400 – LITTLE MUSKINGUM R. (CLEAR FK TO FIFTEENMILE)	19.70	WWH	19.7	0.0	0.0	0.0	0.0	0.0		8800	8300				■		
OH 8 53	06-400 – LITTLE MUSKINGUM R. (RICH FORK TO WITTEN FK)	22.60	WWH	22.6	0.0	0.0	0.0	0.0	0.0		8800	8100			■			
OH 8 11	06-410 – FIFTEEN MILE CREEK	9.10	WWH	9.1	0.0	0.0	0.0	0.0	0.0		8800	8100			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH 5 10					▲							■						
OH 5 3										●	■							
OH 5 2.1										●	■							
OH 5 2.2												■						
OH 5 2.3												■						
OH 9 2											■							
OH 9 11										■								
OH 9 27											■							
OH 9 32					●						■	■						
OH 8 1																		
OH 8 15																		
OH 8 53																		
OH 8 11																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Talings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH 5 10		■																																		
OH 5 3																■																				
OH 5 2.1																■																				
OH 5 2.2		■																																		
OH 5 2.3		■																																		
OH 9 2																■ ▲																				
OH 9 11																■																				
OH 9 27																■																				
OH 9 32	●	■														■																				
OH 8 1																																				
OH 8 15																																				
OH 8 53																																				
OH 8 11																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH 8 18	06-420 – ARCHERS FORK	9.90	WWH	9.9	0.0	0.0	0.0	0.0	0.0		8800	8300				■		
OH 8 38	06-428 – STRAIGHT FORK	9.80	WWH	9.8	0.0	0.0	0.0	0.0	0.0		8800	8100			■			
OH 8 29	06-430 – CLEAR FORK	23.70	WWH	23.7	0.0	0.0	0.0	0.0	0.0		8800	8100			■			
OH 8 30	06-431 – WITTEN RUN	6.60	WWH	5.0	0.0	0.0	0.0	1.6	0.0		8800	8400				■		
OH 8 44	06-440 – WITTEN FORK	11.20	WWH	11.2	0.0	0.0	0.0	0.0	0.0		8800	8400				■		
OH 8 48	06-444 – DISMAL CREEK	7.10	WWH	7.1	0.0	0.0	0.0	0.0	0.0		8800	8100			■			
OH 8 59	06-450 – TOWN FORK	6.70	WWH	6.7	0.0	0.0	0.0	0.0	0.0		8800	8100			■			
OH 8 58	06-451 – RICH FORK	6.50	WWH	6.5	0.0	0.0	0.0	0.0	0.0		8800	8100			■			
OH 6 1	06-500 – MCMAHON CREEK (WILLIAMS CREEK TO OHIO RIVER)	12.70	WWH	1.3	0.0	6.8	4.6	0.0	11.4		8800	8300	■					
OH 6 10	06-500 – MCMAHON CREEK (HEADWATERS TO WILLIAMS CREEK)	15.40	WWH	9.6	0.0	0.0	5.8	0.0	5.8		8800	8300	■					
OH 6 3	06-502 – TROUGH RUN	3.20	WWH	3.2	0.0	0.0	0.0	0.0	0.0		8800	8300			■			
OH 6 11	06-504 – WILLIAMS CREEK	8.00	WWH	0.0	8.0	0.0	0.0	0.0	0.0		8800	8300	■					
OH 6 5	06-510 – LITTLE MCMAHON CREEK	8.30	WWH	3.9	0.0	0.0	4.4	0.0	0.0		8800	8300	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH 8 18																		
OH 8 38																		
OH 8 29																		
OH 8 30																		
OH 8 44																		
OH 8 48																		
OH 8 59																		
OH 8 58																		
OH 6 1											■							
OH 6 10											■	■						
OH 6 3																		
OH 6 11																		
OH 6 5										■	●	▲						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH 8 18																																				
OH 8 38																																				
OH 8 29																																				
OH 8 30																																				
OH 8 44																																				
OH 8 48																																				
OH 8 59																																				
OH 8 58																																				
OH 6 1															■																					
OH 6 10		▲													■																					
OH 6 3																																				
OH 6 11																																				
OH 6 5		▲													■	▲																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH 6 7	06-512 – KINGS RUN	2.20	LRW	1.7	0.0	0.0	0.5	0.0	0.0		8800	8300	■					
OH 6 8	06-513 – AULTS RUN	3.10	WWH	0.0	0.0	0.0	3.1	0.0	3.1		8800	8300	■					
OH 6 5.1	06-519 – TRIB. TO LITTLE MCMAHON CREEK (RM 2.3)	2.00	LRW	0.0	0.0	0.0	0.5	1.5	0.5		8800	8300			■			
OH 6 57	06-600 – SHORT CREEK (NORTH FORK TO PINEY FORK)	11.20	LWH	0.5	0.0	0.0	0.0	10.7	0.0		8800	8000			■			
OH 6 50	06-600 – SHORT CREEK (PINEY FORK TO OHIO RIVER)	8.20	LWH	0.0	0.0	0.0	0.5	7.7	0.5		9002	8809		■				
OH 6 73	06-617 – MIDDLE FORK SHORT CREEK	9.30	LWH	0.0	0.0	0.0	1.9	7.4	0.0		8800	8500		■				
OH 6 73.1	06-619 – SALLY BUFFALO CREEK	5.00	WWH	0.0	0.0	0.0	0.5	4.5	0.5		8800	8500		■				
OH 7 1	06-700 – SUNFISH CREEK (PINEY FORK TO OHIO RIVER)	14.70	EWH	14.1	0.0	0.0	0.6	0.0	0.6	Y	8800	8300	■					
OH 7 5	06-700 – SUNFISH CREEK (HEADWATERS TO PINEY FORK)	15.30	WWH	14.8	0.0	0.0	0.5	0.0	0.5	Y	8800	8300	■					
OH 7 6	06-704 – PINEY FORK	6.80	LWH	6.8	0.0	0.0	0.0	0.0	0.0		8800	8300	■					
OH 7 7	06-705 – EAST FORK PINEY FORK	5.00	WWH	0.0	0.0	0.0	5.0	0.0	5.0		8800	8300	■					
OH 7 8	06-706 – STANDINGSTONE RUN	3.60	WWH	0.9	0.0	0.0	2.7	0.0	2.7	Y	8800	8300	■					
OH 7 10	06-708 – BAKER FORK	6.70	WWH	6.7	0.0	0.0	0.0	0.0	0.0		8800	8300	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH 6 7										■	■							
OH 6 8										■	■							
OH 6 5.1										■								
OH 6 57																		
OH 6 50											■				■			
OH 6 73						▲				■	■	▲						
OH 6 73.1										■	■							
OH 7 1														■				
OH 7 5															■			
OH 7 6																		
OH 7 7												■			●			
OH 7 8												■						
OH 7 10																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Talings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulatbn	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH 6 7															■	▲																				
OH 6 8															■																					
OH 6 5.1															■																					
OH 6 57																																				
OH 6 50													●		■											■										
OH 6 73	▲														■																					
OH 6 73.1															■																					
OH 7 1																										■										
OH 7 5																																			■	
OH 7 6																																				
OH 7 7	■																																		●	
OH 7 8	■																																			
OH 7 10																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH 6 24	06-800 – WHEELING CREEK (COX RUN TO OHIO RIVER)	15.40	LWH	0.5	0.0	0.0	0.0	14.9	0.0		8800	8300			■			
OH 6 34	06-800 – WHEELING CREEK (HEADWATERS TO COX RUN)	16.10	LWH	0.0	0.0	0.0	3.3	12.8	0.0		8800	8300		■				
OH 6 29	06-805 – STEEP RUN	2.60	WWH	0.5	0.0	0.0	0.0	2.1	0.0		8800	7900			■			
OH 6 30	06-806 – TOWN RUN	3.20	WWH	0.0	0.0	0.0	2.9	0.3	2.9		8800	8300		■				
OH 5 38	06-900 – YELLOW CREEK (BRUSH CREEK TO OHIO RIVER)	4.60	WWH	0.0	0.0	0.8	3.8	0.0	4.6		8800	8300	■					
OH 5 54	06-900 – YELLOW CREEK (TOWN FORK TO BRUSH CREEK)	4.20	WWH	1.1	0.0	3.1	0.0	0.0	3.1		8800	8300	■					
OH 5 60	06-900 – YELLOW CREEK (ELKHORN CREEK TO TOWN FORK)	17.10	WWH	0.0	0.0	0.0	17.1	0.0	17.1		8800	8300	■					
OH 5 76	06-900 – YELLOW CREEK (HEADWATERS TO ELKHORN CREEK)	8.20	WWH	0.0	0.0	0.0	8.2	0.0	8.2		8800	8300	■					
OH 5 40	06-902 – HOLLOW ROCK RUN	6.40	WWH	0.0	0.0	0.0	0.0	6.4	0.0		8800	8300					■	
OH 5 51	06-905 – BRUSH CREEK	11.00	WWH	0.5	0.0	0.0	0.0	10.5	0.0		8800	8300			■			
OH 5 43	06-910 – NORTH FORK YELLOW CREEK	17.90	WWH	16.1	0.0	1.8	0.0	0.0	1.8		8800	8300	■					
OH 5 46	06-913 – SALISBURY RUN	2.50	LRW	2.5	0.0	0.0	0.0	0.0	0.0		8800	8300	■					
OH 5 47	06-914 – RANDOLPH RUN	2.80	LRW	0.0	0.0	0.0	2.8	0.0	0.0		8800	8300	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH 6 24																		
OH 6 34										■	■							
OH 6 29																		
OH 6 30						●						■						
OH 5 38														■				
OH 5 54											■							
OH 5 60					▲						■	●						
OH 5 76											■							
OH 5 40																		
OH 5 51																		
OH 5 43					■						●							
OH 5 46																		
OH 5 47					▲					■	●							

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Talings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulatbn	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH 6 24																																				
OH 6 34															■	▲																				
OH 6 29																																				
OH 6 30		■																																		
OH 5 38															▲											■										
OH 5 54															■																					
OH 5 60		●													■																					
OH 5 76															■																					
OH 5 40																																				
OH 5 51																																				
OH 5 43															■																					
OH 5 46																																				
OH 5 47															■																					

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

09/05/90

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH 5 48	06-915 – NANCY RUN	5.30	CWH	5.3	0.0	0.0	0.0	0.0	0.0		8800	8300	■					
OH 5 66	06-926 – UPPER NORTH FORK	8.40	WWH	8.4	0.0	0.0	0.0	0.0	0.0		8800	8300			■			
OH 5 71	06-931 – ELKHORN CREEK	8.90	CWH	8.9	0.0	0.0	0.0	0.0	0.0		8800	8300	■					
OH 5 72	06-932 – STRAWCAMP RUN	4.80	CWH	4.8	0.0	0.0	0.0	0.0	0.0		8800	8300	■					
OH 5 73	06-933 – CENTER FORK	5.00	CWH	5.0	0.0	0.0	0.0	0.0	0.0		8800	8300	■					
OH 5 74	06-934 – TRAIL RUN	1.90	CWH	1.9	0.0	0.0	0.0	0.0	0.0		8800	8300	■					
OH 5 77	06-936 – WOLF CREEK	4.50	LRW	0.0	0.0	0.0	4.5	0.0	0.0		8800	8300	■					
OH 5 43.2	06-941 – TRIB. TO NORTH FORK YELLOW CREEK	2.00	LRW	0.0	0.0	0.0	2.0	0.0	2.0		8800	8300	■					
OH93 5	07-001 – ASHTABULA RIVER	27.50	WWH	1.7	0.0	0.0	6.0	19.8	6.0	Y	8800	8300		■				
OH93 10	07-004 – WEST BRANCH ASHTABULA RIVER	16.50	WWH	1.9	0.0	0.0	0.0	14.6	0.0		8800	8400				■		
OH93 16	07-007 – COWLES CREEK	10.50	WWH	5.7	0.0	0.0	4.8	0.0	4.8		8800	8100	■					
OH93 6	07-010 – FIELDS BROOK	6.00	LWH	0.0	0.0	0.0	6.0	0.0	0.0	Y	8800	8700			■			
OH93 3	07-100 – CONNEAUT CREEK (OH./PA. BORDER TO LAKE ERIE)	23.80	CWH	0.0	0.0	0.0	6.4	17.4	6.4	Y	8800	8700					■	

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Talings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH 5 48																																																								
OH 5 66																																																								
OH 5 71											■																						■																							
OH 5 72																																																								
OH 5 73																																																								
OH 5 74																																																								
OH 5 77										■		▲																					■	▲																						
OH 5 43.2										■																							■																							
OH93 5		●		■				▲				●					▲		■													●								●												■			
OH93 10																																																								
OH93 16							▲					■								■																																				
OH93 6		●		■			▲						▲						■													▲								●												■			
OH93 3				■								▲								■													▲							▲	▲											▲			

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Biosurvey-A	Intensive Biosurvey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH93 2	07-200 – TURKEY CREEK	1.30	CWH	0.0	0.0	0.0	1.3	0.0	1.3		8800	8100		■				
OH 4 1	08-001 – LITTLE BEAVER CREEK (NORTH FORK TO PA.)	7.80	EWH	7.8	0.0	0.0	0.0	0.0	0.0	Y	8800	8500	■					
OH 4 14	08-001 – LITTLE BEAVER CREEK (MIDDLE FK TO NORTH FK)	8.00	EWH	8.0	0.0	0.0	0.0	0.0	0.0		8800	8700	■					
OH 4 3	08-100 – NORTH FORK (BULL CREEK TO L. BEAVER CREEK)	6.10	WWH	0.0	0.0	5.6	0.5	0.0	6.1		8800	8500	■					
OH 4 10	08-100 – NORTH FORK (PA. TO BULL CREEK)	1.50	WWH	0.0	0.0	1.5	0.0	0.0	1.5		8800	8500	■					
OH 4 6	08-103 – BULL CREEK	14.50	WWH	14.5	0.0	0.0	0.0	0.0	0.0		8800	8500	■					
OH 4 7	08-104 – LESLIE RUN	7.20	WWH	0.0	0.0	0.1	3.3	3.8	3.4	Y	8800	8500	■					
OH 4 12	08-114 – HONEY CREEK	13.00	WWH	0.0	0.0	0.0	13.0	0.0	13.0		8800	8700		■				
OH 4 11.3	08-117 – WEST FORK STATELINE CREEK	3.00	WWH	0.1	0.0	1.2	1.7	0.0	2.9		8800	8500	■					
OH 4 11.2	08-118 – EAST FORK STATELINE CREEK	3.00	WWH	3.0	0.0	0.0	0.0	0.0	0.0		8800	8500	■					
OH 4 7.1	08-119 – TRIB. TO LESLIE RUN	2.00	LRW	0.0	0.0	0.0	2.0	0.0	0.0		8800	8500	■					
OH 4 8.1	08-120 – TRIB. TO LITTLE BULL CREEK	2.00	WWH	2.0	0.0	0.0	0.0	0.0	0.0		8800	8500		■				
OH 4 17	08-200 – MIDDLE FORK (MIDDLE RUN TO WEST FORK)	8.60	EWH	0.0	8.6	0.0	0.0	0.0	8.6	Y	8800	8500	■					

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH93 2					■																															▲																			■	
OH 4 1																																																									
OH 4 14																																																									
OH 4 3		●			■															■	●																																				
OH 4 10					■				■			▲								■	■													▲																							
OH 4 6																																																									
OH 4 7					■							●								■	●																																				
OH 4 12											■	■									■													■																							
OH 4 11.3											■																							■																							
OH 4 11.2																																																									
OH 4 7.1					■							●								■																																					
OH 4 8.1																																																									
OH 4 17																																																									

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH 4 22	08-200 – MIDDLE FORK (EAST BRANCH TO MIDDLE RUN)	12.90	WWH	0.0	0.7	12.2	0.0	0.0	12.9	Y	8800	8500	■					
OH 4 24	08-200 – MIDDLE FORK (HEADWATERS TO EAST BRANCH)	28.50	WWH	0.0	0.6	8.5	19.4	0.0	28.5		8800	8500	■					
OH 4 18	08-201 – TURKEYFOOT RUN	3.50	WWH	3.5	0.0	0.0	0.0	0.0	0.0		8800	8400		■				
OH 4 21	08-204 – MIDDLE RUN	5.50	WWH	0.0	0.0	0.0	0.5	5.0	0.5		8800	8500		■				
OH 4 23	08-205 – STONE MILL RUN	4.50	WWH	0.0	4.5	0.0	0.0	0.0	0.0		8800	8500	■					
OH 4 25	08-206 – EAST BRANCH MIDDLE FORK	9.50	WWH	0.8	0.0	0.0	2.2	6.5	2.2	Y	8800	8500	■					
OH 4 26	08-207 – CHERRY VALLEY RUN	9.00	WWH	0.0	0.0	0.0	2.5	6.5	2.5	Y	8800	8500	■					
OH 4 24.1	08-208 – BUTTERMILK CREEK	3.00	WWH	0.5	0.0	0.0	0.0	2.5	0.0		8800	8500		■				
OH 4 27	08-300 – WEST FORK (BIG CREEK TO MIDDLE FORK)	6.00	EWH	0.0	6.0	0.0	0.0	0.0	0.0		8800	8500	■					
OH 4 34	08-300 – WEST FORK (HEADWATERS TO BIG CREEK)	16.00	EWH	0.0	16.0	0.0	0.0	0.0	0.0	Y	8800	8500	■					
OH 4 34.1	08-308 – CHEMLIME TRIB.	2.00	LRW	1.5	0.0	0.0	0.5	0.0	0.5		8800	8500	■					
OH 4 34.3	08-309 – ROWLEY RUN	2.00	WWH	0.0	0.0	0.0	2.0	0.0	2.0		8800	7900		■				
OH 4 34.2	08-310 – TRIB. TO W. FK. L. BEAVER CR. (RM 13.0)	2.00	WWH	0.0	0.0	0.0	2.0	0.0	2.0		8800	7900		■				

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH 4 22		■										▲						
OH 4 24		■									▲	●			▲			
OH 4 18																		
OH 4 21						■												
OH 4 23																		
OH 4 25															■			
OH 4 26											▲	■						
OH 4 24.1																		
OH 4 27																		
OH 4 34																		
OH 4 34.1					■	■												
OH 4 34.3						■												
OH 4 34.2					■													

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH 4 22		▲																															■			
OH 4 24		●						▲																	▲								■			
OH 4 18																																				
OH 4 21																																				■
OH 4 23																																				
OH 4 25																									■											
OH 4 26		■													▲																					
OH 4 24.1																																				
OH 4 27																																				
OH 4 34																																				
OH 4 34.1																																				
OH 4 34.3																																				■
OH 4 34.2																																				■

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH29 7	09-038 – PAINT CREEK	3.50	WWH	0.0	0.0	0.0	3.5	0.0	3.2		8800	8700	■					
OH29 19	09-057 – KYGER CREEK	11.80	LRW	0.0	0.0	0.0	11.8	0.0	0.0		8800	8200	■					
OH29 22	09-060 – STINGY RUN	2.40	LRW	0.0	0.0	0.0	2.4	0.0	0.0		8800	8200	■					
OH29 24	09-062 – BELL LICK RUN	1.80	WWH	0.0	0.0	0.0	0.5	1.3	0.5		8800	8200	■					
OH31 2	09-100 – INDIAN GUYAN CREEK (L. INDIAN GUYAN CR. TO OH	14.60	WWH	7.3	0.0	0.0	0.0	7.3	0.0		8800	7800		■				
OH29 28	09-200 – LEADING CREEK (LITTLE LEADING CR. TO OHIO R.)	8.50	WWH	0.0	0.5	0.0	0.0	8.0	0.0		8800	8000		■				
OH29 35	09-200 – LEADING CREEK (DEXTER RUN TO L. LEADING CR.)	10.00	WWH	0.0	0.0	0.0	10.0	0.0	10.0		8800	8700	■					
OH29 39	09-200 – LEADING CREEK (HEADWATERS TO DEXTER RUN)	11.00	WWH	0.0	0.0	0.0	11.0	0.0	11.0		8800	8700	■					
OH29 34	09-201 – LITTLE LEADING CREEK	10.60	WWH	10.6	0.0	0.0	0.0	0.0	0.0		8800	8000		■				
OH29 31	09-212 – BAILEY RUN	2.30	WWH	2.3	0.0	0.0	0.0	0.0	0.0		8800	7900		■				
OH33 3	09-300 – LITTLE SCIOTO RIVER (ROCKY FORK TO OHIO RIVER	18.30	EWH	0.0	0.0	18.3	0.0	0.0	18.3		8800	8300	■					
OH33 49	09-400 – PINE CREEK (LITTLE PINE CREEK TO OHIO RIVER)	19.50	WWH	0.5	0.0	0.0	0.0	19.0	0.0		8800	7800		■				
OH33 61	09-400 – PINE CREEK (HALES CREEK TO LITTLE PINE CREEK)	18.70	WWH	0.0	0.0	6.5	0.0	12.2	6.5		8800	8300			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH29 7												■			●			
OH29 19					■					■	■				●			
OH29 22					■													
OH29 24											●			■	■			
OH31 2																		
OH29 28																		
OH29 35														■				
OH29 39														■				
OH29 34																		
OH29 31																		
OH33 3														■				
OH33 49																		
OH33 61											■							

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH29 7		■																							●											
OH29 19	●															■																			▲	
OH29 22	■																																			
OH29 24						●																			■											●
OH31 2																																				
OH29 28																																				
OH29 35																																			■	
OH29 39																																				■
OH29 34																																				
OH29 31																																				
OH33 3																																				■
OH33 49																																				
OH33 61															■																					

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

09/05/90

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH33 74	09-422 – PAINTER CREEK	2.30	WWH	0.0	0.0	2.3	0.0	0.0	2.3		8800	8400			■			
OH31 49	09-500 – RACCOON CREEK (LITTLE RACCOON CREEK TO RYAN R	9.80	LRW	0.0	0.0	4.3	5.5	0.0	9.8	Y	8800	8600				■		
OH30 60	09-500 – RACCOON CREEK (HEADWATERS TO BRUSHY FORK)	8.90	LRW	0.0	0.0	0.0	8.9	0.0	8.9		9002	8806			■			
OH30 41	09-500 – RACCOON CREEK (HEWETT FORK TO ELK FORK)	22.90	WWH	0.0	0.0	0.0	0.5	22.4	0.5		9002	8608				■		
OH30 1	09-510 – LITTLE RACCOON CREEK (DICKASON RUN TO RACCOON	12.60	LRW	0.0	0.0	0.0	12.6	0.0	0.0		8800	8400	■					
OH30 7	09-510 – LITTLE RACCOON CREEK (SAND RUN TO DICKASON RU	16.30	LRW	0.0	0.0	0.0	16.3	0.0	0.0	Y	8800	8400	■					
OH30 17	09-510 – LITTLE RACCOON CREEK (HEADWATERS TO SAND RUN)	8.20	WWH	0.0	0.0	0.0	8.2	0.0	5.0		8800	8400	■					
OH30 5	09-514 – DICKASON RUN	8.40	LWH	0.0	0.0	0.0	0.5	7.9	0.5		9002	8112			■			
OH30 9	09-517 – GOOSE RUN	1.50	LWH	0.0	0.0	0.0	1.5	0.0	1.5		9002	8312			■			
OH30 12	09-520 – FLINT RUN	2.20	LWH	0.0	0.0	0.0	2.2	0.0	2.2		9002	8612			■			
OH30 15	09-523 – MULGA RUN	4.70	LRW	0.0	0.0	0.0	4.7	0.0	0.0		9002	8308			■			
OH30 16	09-524 – MEADOW RUN	4.60	WWH	0.0	0.0	0.0	4.6	0.0	0.0	Y	8800	8400	■					
OH30 18	09-525 – SAND RUN	4.30	WWH	0.0	0.0	0.0	4.3	0.0	4.3		8800	8400	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH33 74						■												
OH31 49					●					■	●							
OH30 60										■								
OH30 41										■								
OH30 1					●					■								
OH30 7					●					■	▲	■						
OH30 17					●					■				●				
OH30 5										■								
OH30 9										■								
OH30 12										■								
OH30 15										■								
OH30 16					●	●				■		■						
OH30 18											■	●						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH33 74																																				■
OH31 49																■																				
OH30 60																■																				
OH30 41																■																				
OH30 1																■																				
OH30 7		■														■	●																●			
OH30 17																●																				●
OH30 5																■																				
OH30 9																■																				
OH30 12																■																				
OH30 15																■																				
OH30 16		■														■	●																●			
OH30 18						■		■	▲																											

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH30 35	09-530 – ELK FORK	18.60	LRW	0.0	0.0	4.2	14.4	0.0	0.0		8800	8100	■					
OH30 38	09-533 – WOLF RUN	7.10	LRW	0.0	0.0	0.0	7.1	0.0	0.0		8800	8100	■					
OH30 39	09-534 – PUNCHEON FORK	5.60	LRW	0.0	0.0	0.0	5.6	0.0	0.0		8800	8100	■					
OH31 50	09-539 – INDIAN CREEK	9.10	WWH	0.0	0.0	0.0	1.5	7.6	1.5		8800	8700		■				
OH31 51	09-540 – LITTLE INDIAN CREEK	8.90	WWH	0.5	0.0	0.0	0.0	8.4	0.0		8800	8600			■			
OH30 50	09-563 – HEWETT FORK	15.40	LWH	0.0	0.0	0.0	15.4	0.0	0.0		9002	8612			■			
OH30 56	09-568 – SANDY RUN	6.00	WWH	0.0	0.0	0.0	3.8	2.2	3.8		9002	8312			■			
OH30 59	09-571 – BRUSHY FORK	10.80	EWH	0.0	0.0	0.0	10.8	0.0	10.8		9002	8312			■			
OH30 63	09-574 – EAST BRANCH RACCOON CREEK	7.70	LRW	0.0	0.0	0.0	7.7	0.0	0.0		9002	8612			■			
OH30 40	09-578 – AUSTIN POWDER TRIB.	4.00	LRW	0.0	0.0	0.0	4.0	0.0	0.0		8800	8100	■					
OH30 17.1	09-582 – SUGAR RUN	2.00	WWH	0.0	0.0	0.0	1.6	0.4	1.6		8800	8500			■			
OH30 56.1	09-583 – BIG FOUR HOLLOW (LAKE HOPE)	1.40		0.0	0.0	0.0	1.4	0.0	0.0		9002	8312			■			
OH30 50.1	09-586 – CARBONDALE CREEK	2.30		0.0	0.0	0.0	0.5	1.8	0.5		9002	8312			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH30 35					■				●	■	■	●						
OH30 38					■					■								
OH30 39					●					■								
OH31 50												■						
OH31 51																		
OH30 50										■								
OH30 56										■								
OH30 59										■								
OH30 63										■								
OH30 40					●		●		●					■				
OH30 17.1					●					■								
OH30 56.1										■								
OH30 50.1										■								

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH30 35	●	●													■																					
OH30 38															■																					
OH30 39															■																					
OH31 50		■																																		
OH31 51																																				
OH30 50															■																					
OH30 56															■																					
OH30 59															■																					
OH30 63															■																					
OH30 40	■														▲																					●
OH30 17.1															■																					
OH30 56.1															■																					
OH30 50.1															■																					

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

09/05/90

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH30 63.1	09-587 – TRIB. TO E. BR. RACCOON CREEK (RM 5.6)	0.30		0.0	0.0	0.0	0.3	0.0	0.0		9002	8312		■				
OH28 30	09-600 – SHADE RIVER (MIDDLE BR. SHADE R. TO OHIO R.)	18.20	EWH	0.0	0.0	0.0	18.2	0.0	18.2		8800	8400			■			
OH32 1	09-700 – SYMMES CREEK (VENISONHAM CREEK TO OHIO RIVER)	17.00	WWH	0.5	0.0	0.0	0.0	16.5	0.0		8800	7800		■				
OH32 25	09-720 – COULLEY FORK	3.90	WWH	3.9	0.0	0.0	0.0	0.0	0.0		8800	8400	■					
OH32 35	09-730 – BLACK FORK	16.10	WWH	0.0	0.0	0.0	6.4	9.7	6.4		8800	8700	■					
OH32 40	09-735 – HUNTINGCAMP CREEK	3.40	WWH	0.0	0.0	0.0	3.4	0.0	3.4	Y	8800	8700	■					
OH49 4	10-003 – TENMILE CREEK	6.00	WWH	6.0	0.0	0.0	0.0	0.0	0.0		8800	7800		■				
OH49 27	10-023 – BEAR CREEK	7.00	WWH	0.0	0.0	0.0	2.5	4.5	2.5		8800	8700	■					
OH49 31	10-027 – BULLSKIN CREEK	13.10	WWH	13.1	0.0	0.0	0.0	0.0	0.0	Y	8800	7800		■				
OH47 92	10-085 – UPPER TWIN CREEK	8.80	WWH	8.8	0.0	0.0	0.0	0.0	0.0		8800	8700				■		
OH47 27	10-100 – EAGLE CREEK(E/N FORK EAGLE CREEK TO OHIO RIVE	14.50	WWH	0.0	0.0	7.1	7.4	0.0	14.5		8800	8300			■			
OH48 1	10-200 – OHIO BRUSH CREEK (SEMPLE CREEK TO OHIO RIVER)	14.10	EWH	0.0	0.0	8.4	5.7	0.0	14.1	Y	8800	8700	■					
OH48 11	10-200 – OHIO BRUSH CREEK (WEST FORK TO SEMPLE CREEK)	14.60	EWH	0.0	0.0	14.6	0.0	0.0	14.6		8800	8700	■					

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH30 63.1										■																							■																						
OH28 30											■				●																		■																						
OH32 1																																																							
OH32 25																																																							
OH32 35												■								■																																			
OH32 40												■			●					■																								●											
OH49 4																																																							
OH49 27												■								■																				▲															
OH49 31																																																							
OH47 92																																																							
OH47 27											●			■										●																													■	
OH48 1											●	●		■	■									●			▲																	■								■	
OH48 11											●			■										●			▲																										■	

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH48 31	10-200 – OHIO BRUSH CREEK (BAKER FORK TO WEST FORK)	12.50	EWH	12.5	0.0	0.0	0.0	0.0	0.0		8800	8700	■					
OH48 44	10-200 – OHIO BRUSH CREEK (HEADWATERS TO BAKER FORK)	5.90	EWH	0.0	0.0	5.9	0.0	0.0	5.9		8800	8700	■					
OH48 6	10-205 – BEASLEY FORK	7.00	WWH	0.0	1.8	0.0	5.2	0.0	5.2		8800	8700	■					
OH48 13	10-211 – LICK CREEK	7.60	EWH	2.8	0.0	0.0	4.8	0.0	4.8		8800	8000		■				
OH48 14	10-212 – TREBER RUN	4.20	EWH	4.2	0.0	0.0	0.0	0.0	0.0		8800	8000		■				
OH48 15	10-213 – CAVE RUN	3.00	EWH	3.0	0.0	0.0	0.0	0.0	0.0		8800	8000		■				
OH48 16	10-215 – LOUISE TRIBUTARY	4.00	EWH	0.0	0.0	0.0	4.0	0.0	4.0		8800	8000		■				
OH48 33	10-216 – LITTLE EAST FORK	4.80	WWH	4.8	0.0	0.0	0.0	0.0	0.0		8800	8700		■				
OH48 18	10-220 – WEST FORK (BUCK RUN TO OHIO BRUSH CREEK)	9.00	EWH	2.9	0.0	1.1	5.0	0.0	6.1		8800	8700	■					
OH48 26	10-220 – WEST FORK OHIO BRUSH CR. (HEADWATERS TO BUCK	21.50	EWH	21.5	0.0	0.0	0.0	0.0	0.0		8800	8700	■					
OH48 19	10-221 – SPOON RIVER	3.10	EWH	3.1	0.0	0.0	0.0	0.0	0.0		8800	8400			■			
OH48 22	10-224 – CHERRY FORK	10.30	WWH	0.0	0.0	10.3	0.0	0.0	10.3		8800	8700		■				
OH48 29	10-230 – ELK FORK	4.50	WWH	0.0	0.0	0.0	4.5	0.0	4.5		8800	8700		■				

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH48 31																		
OH48 44														■				
OH48 6												■		■				
OH48 13														■				
OH48 14																		
OH48 15																		
OH48 16														■				
OH48 33																		
OH48 18											●	■		■				
OH48 26																		
OH48 19																		
OH48 22											●			■				
OH48 29												■						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Talings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH48 31																																				
OH48 44																																				■
OH48 6		■																																		■
OH48 13																																				■
OH48 14																																				
OH48 15																																				
OH48 16																																				■
OH48 33																																				
OH48 18		■					●																											■		
OH48 26																																				
OH48 19																																				
OH48 22							●	●	▲																											■
OH48 29		■						■																												

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH48 32	10-248 – SHIMER RUN	2.20	WWH	0.5	0.0	0.0	0.5	1.2	0.5		8800	8700	■					
OH48 18.1	10-250 – TRIB. TO W. FK. OHIO BRUSH CR. (SEAMAN)	2.00	WWH	0.0	0.0	0.0	0.5	1.5	0.5		8800	8500		■				
OH49 42	10-400 – WHITEOAK CREEK (STERLING RUN TO OHIO RIVER)	20.80	EWH	10.5	0.0	0.0	5.5	4.8	5.5		8800	8700	■					
OH49 60	10-420 – EAST FORK WHITEOAK CREEK	20.80	EWH	20.8	0.0	0.0	0.0	0.0	0.0		8800	8700	■					
OH49 69	10-430 – NORTH FORK WHITEOAK CREEK	21.00	EWH	0.0	0.0	0.0	21.0	0.0	21.0		8800	8300	■					
OH47115	10-508 – TURKEY CREEK	13.40	WWH	0.0	0.0	13.4	0.0	0.0	13.4		8800	7900	■					
OH50 1	11-001 – LITTLE MIAMI RIVER (GLADY RUN TO CAESAR CREEK	12.80	EWH	0.0	0.0	0.0	12.8	0.0	12.8	Y	8800	8300	■					
OH50 4	11-001 – LITTLE MIAMI RIVER (BEAVER CREEK TO GLADY RUN	9.00	EWH	0.0	0.0	0.8	8.2	0.0	9.0	Y	8800	8300	■					
OH50 10	11-001 – LITTLE MIAMI RIVER (MASSIES CREEK TO BEAVER C	6.80	EWH	0.0	0.0	1.1	5.7	0.0	6.8	Y	8800	8300	■					
OH50 17	11-001 – LITTLE MIAMIRIVER (NORTH FORK TO MASSIES CREE	12.10	EWH	0.0	0.0	5.9	6.2	0.0	12.1	Y	8800	8300	■					
OH50 23	11-001 – LITTLE MIAMI RIVER (HEADWATERS TO NORTH FORK)	13.90	EWH	0.0	0.0	0.0	9.7	4.2	9.7	Y	8800	8300	■					
OH54 1	11-001 – LITTLE MIAMI RIVER (E. FK. L. MIAMI R. TO OHI	11.50	EWH	0.0	3.9	7.6	0.0	0.0	7.6	Y	8800	8300	■					
OH54 7	11-001 – LITTLE MIAMI R. (O'BANNON CR. TO E. FK. L. MI	12.50	EWH	0.0	4.6	6.7	1.2	0.0	7.9	Y	8800	8300	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH48 32																		
OH48 18.1						■			■									
OH49 42																		
OH49 60																		
OH49 69											■							
OH47115					■													
OH50 1	■					■						■						
OH50 4						■						■						
OH50 10												■						
OH50 17												■						
OH50 23												■			●			
OH54 1												■		●				
OH54 7						●						■						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH48 32																																				
OH48 18.1		■																																		
OH49 42																																				
OH49 60																																				
OH49 69						■																														
OH47115																																				
OH50 1		■																																		
OH50 4		■																																		
OH50 10		■																																		
OH50 17		●							■			■																								
OH50 23									■			■																■	■							
OH54 1		■												■												●										
OH54 7		■																																		

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH54 16	11-001 – LITTLE MIAMI RIVER (TURTLE CR. TO O'BANNON CR	9.20	EWH	0.0	0.0	7.1	2.1	0.0	9.2	Y	8800	8300	■					
OH54 27	11-001 – LITTLE MIAMI RIVER (TODD FORK TO TURTLE CREEK	5.30	EWH	0.0	0.0	5.3	0.0	0.0	5.3	Y	8800	8300	■					
OH54 30	11-001 – LITTLE MIAMI RIVER (CAESAR CREEK TO TODD FORK	12.40	EWH	5.8	0.0	3.9	2.7	0.0	6.6	Y	8800	8300	■					
OH54 4	11-004 – DUCK CREEK	8.20	WWH	0.0	0.0	0.0	8.2	0.0	8.2		8800	8300	■					
OH54 9	11-007 – SYCAMORE CREEK	4.50	WWH	0.0	0.0	0.0	0.4	4.1	0.4		8800	8300	■					
OH54 12	11-010 – O'BANNON CREEK	12.00	WWH	0.0	0.5	0.0	0.0	11.5	0.0		8800	8300	■					
OH54 20	11-017 – SIMPSON CREEK	4.00	WWH	0.0	0.0	0.7	0.0	3.3	0.7		8800	8300		■				
OH54 23	11-020 – MUDDY CREEK	8.90	WWH	2.5	0.0	2.5	0.0	3.9	2.5		9002	8910	■					
OH54 24	11-021 – TURTLE CREEK	12.00	WWH	0.0	6.3	0.0	0.0	5.7	0.0		9002	8909	■					
OH54 25	11-022 – DRY RUN	2.00	WWH	0.8	0.0	0.0	1.0	0.2	1.0		8800	8300	■					
OH50 2	11-030 – NEWMAN RUN	4.00	EWH	0.5	0.0	0.0	3.5	0.0	3.5		8800	8300	■					
OH50 3	11-031 – MILL RUN	5.80	EWH	1.0	0.0	0.0	0.0	4.8	0.0		8800	8300	■					
OH50 5	11-032 – GLADY RUN	6.30	WWH	0.0	0.0	0.0	4.8	1.5	4.8		8800	8300	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH54 16					■							■						
OH54 27												■						
OH54 30					●	■						■						
OH54 4						●						■						
OH54 9						■						■						
OH54 12																		
OH54 20						■												
OH54 23												■						
OH54 24																		
OH54 25												■						
OH50 2						■												
OH50 3																		
OH50 5						■						■						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Talings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH54 16	■	●																																		
OH54 27		■																																		
OH54 30	■	■																																		
OH54 4														■																						
OH54 9		■																																		
OH54 12																																				
OH54 20		■																																		
OH54 23		■																																		
OH54 24																																				
OH54 25		■																				■														
OH50 2																																			■	
OH50 3																																				
OH50 5		■												●																						

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH50 8	11-035 – BEAVER CREEK	8.40	WWH	0.0	0.0	0.0	1.1	7.3	1.1	Y	8800	8300	■					
OH50 9	11-036 – LITTLE BEAVER CREEK	9.00	WWH	0.0	0.0	0.0	6.3	2.7	6.3		8800	8200	■					
OH50 11	11-037 – LUDLOW CREEK	5.00	WWH	0.5	0.0	0.0	0.0	4.5	0.0		8800	8300		■				
OH50 20	11-040 – YELLOW SPRINGS CREEK	2.50	WWH	0.0	0.0	0.0	2.5	0.0	2.5	Y	8800	8300	■					
OH50 21	11-041 – NORTH FORK LITTLE MIAMI RIVER	13.20	WWH	0.0	0.0	0.0	0.5	12.7	0.5		8800	8300	■					
OH50 24	11-043 – LISBON FORK	6.00	WWH	0.0	0.0	0.0	0.5	5.5	0.5		8800	8300	■					
OH50 25	11-044 – GILROY DITCH	7.00	WWH	5.0	0.0	0.6	1.4	0.0	2.0	Y	8800	8300	■					
OH50 10.1	11-045 – SHAWNEE CREEK	5.00	WWH	0.7	0.0	0.0	2.0	2.3	2.0		8800	8700		■				
OH53 1	11-100 – E. FK. LITTLE MIAMI R. (STONELICK CR. TO L. M	8.80	EWH	0.0	2.2	6.6	0.0	0.0	6.6	Y	8800	8200	■					
OH53 16	11-100 – E. FK. LITTLE MIAMI (EAST FK LAKE TO STONELIC	1.70	EWH	1.7	0.0	0.0	0.0	0.0	0.0		8800	8200	■					
OH53 20	11-100 – E. FK. LITTLE MIAMI R. (EAST FORK LAKE)	13.40	EWH	0.0	0.0	4.9	8.5	0.0	13.4		8800	8200	■					
OH53 36	11-100 – E. FK. LITTLE MIAMI R. (HOWARD RUN TO TODD RU	11.30	EWH	8.2	0.0	0.0	3.1	0.0	3.1	Y	8800	8200	■					
OH53 45	11-100 – E. FK. LITTLE MIAMI R. (SOLOMON RUN TO HOWARD	11.20	EWH	0.0	0.0	0.0	11.2	0.0	11.2		8800	8200	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH50 8						■						■						
OH50 9					■	■					▲	■	▲					
OH50 11																		
OH50 20												■						
OH50 21											●	■			■			
OH50 24											●	■						
OH50 25						■	●					■						
OH50 10.1												■						
OH53 1					■							■						
OH53 16																		
OH53 20												■		■	●			
OH53 36												■						
OH53 45												■						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulatbn	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH50 8		■																																		
OH50 9	▲	■						▲						●																						
OH50 11																																				
OH50 20		■												■																						
OH50 21						■																		■												
OH50 24						■																														
OH50 25		■												●																						
OH50 10.1														■																						
OH53 1		■																				▲														
OH53 16																																				
OH53 20		■																								●	■									
OH53 36		■																																		
OH53 45						■																														

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Biosurvey-A	Intensive Biosurvey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH53 52	11-100 – E. FK. LITTLE MIAMI R. (DODSON CR. TO SOLOMON	14.40	EWH	0.0	0.0	0.0	14.4	0.0	14.4		8800	8200	■					
OH53 60	11-100 – E. FK. LITTLE MIAMI R. (HEADWATERS TO DODSON	16.10	WWH	7.7	0.0	1.9	6.5	0.0	8.4		8800	8200	■					
OH53 5	11-104 – SUGARCAMP RUN	3.80	WWH	0.5	0.0	0.0	0.0	3.3	0.0		8800	8200			■			
OH53 6	11-105 – SHAYLER RUN	7.80	WWH	0.5	0.0	0.0	0.0	7.3	0.0		8800	8200			■			
OH53 8	11-107 – STONELICK CREEK (HEADWATERS TO E. FK. L. MIAM	22.90	WWH	3.6	0.0	0.0	3.1	16.2	3.1	Y	8800	8700		■				
OH53 42	11-138 – FIVEMILE CREEK	3.50	WWH	0.5	0.0	0.0	0.0	3.0	0.0		8800	8200	■					
OH53 48	11-143 – GLADY RUN	3.10	WWH	0.5	0.0	0.0	0.0	2.6	0.0		8800	8100			■			
OH53 53	11-147 – SOLOMON RUN	4.60	WWH	1.8	0.0	0.0	2.1	0.7	2.1		8800	8200	■					
OH53 56	11-150 – WEST FORK E. FK. LITTLE MIAMI RIVER	9.00	WWH	3.0	0.0	0.5	0.0	5.5	0.5		8800	8200	■					
OH53 57	11-151 – DODSON CREEK	11.50	EWH	0.0	0.0	0.5	0.0	11.0	0.5	Y	8800	8200	■					
OH53 60.1	11-155 – TRIB. TO E. FK. L. MIAMI RIVER (RM 75.5)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7900			■			
OH53 60.2	11-156 – TRIB. TO E. FK. L. MIAMI RIVER (RM 78.4)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7900			■			
OH53 60.3	11-157 – TRIB. TO E. FK. L. MIAMI RIVER (RM 82.3)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7900			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH53 52											■	■						
OH53 60											■	■						
OH53 5																		
OH53 6																		
OH53 8												■		▲				
OH53 42														■				
OH53 48																		
OH53 53						■						■		●				
OH53 56																		
OH53 57	■																	
OH53 60.1																		
OH53 60.2																		
OH53 60.3																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulatbn	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH53 52		●				■																														
OH53 60						■																■														
OH53 5																																				
OH53 6																																				
OH53 8		■																																		▲
OH53 42																						▲														■
OH53 48																																				
OH53 53		■																																		●
OH53 56																																				
OH53 57		■																																		
OH53 60.1																																				
OH53 60.2																																				
OH53 60.3																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH53 60.4	11-158 – TRIB. TO E. FK. L. MIAMI RIVER (RM 83.9)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7900		■				
OH53 1.1	11-159 – TRIB. TO E. FK. L. MIAMI RIVER (RM 4.8)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7900		■				
OH52 3	11-200 – TODD FORK (LITTLE EAST FORK TO FIRST CREEK)	15.10	EWH	0.0	0.0	0.0	0.5	14.6	0.5		8800	8300		■				
OH52 8	11-200 – TODD FORK (DUTCH CREEK TO LITTLE EAST FORK)	7.00	EWH	0.0	0.0	3.1	0.0	3.9	3.1		8800	8400	■					
OH52 17	11-200 – TODD FORK (HEADWATERS TO DUTCH CREEK)	12.90	EWH	0.0	0.0	0.0	0.5	12.4	0.5		8800	8200		■				
OH52 1	11-201 – FIRST CREEK	7.00	WWH	0.5	0.0	0.0	0.0	6.5	0.0		8800	7900		■				
OH52 4	11-203 – SECOND CREEK	13.50	WWH	0.0	0.0	0.0	7.6	5.9	7.6		8800	8600		■				
OH52 5	11-204 – LICK RUN	4.90	EWH	0.5	0.0	0.0	0.0	4.4	0.0		8800	7900		■				
OH52 11	11-209 – COWAN CREEK	22.40	WWH	0.5	0.0	0.0	0.0	21.9	0.0		8800	8300		■				
OH52 12	11-210 – WILSON CREEK	3.60	WWH	0.0	0.0	0.0	0.5	3.1	0.5		8800	8300		■				
OH52 14	11-212 – LYTLE CREEK	10.10	WWH	3.4	0.0	1.1	5.6	0.0	6.7	Y	8800	8400	■					
OH52 15	11-213 – LITTLE CREEK	2.80	WWH	0.5	0.0	0.0	0.0	2.3	0.0		8800	8300		■				
OH52 18	11-215 – DUTCH CREEK	5.50	EWH	0.0	0.0	0.0	0.5	5.0	0.5		8800	8300		■				

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH53 60.4																		
OH53 1.1																		
OH52 3						■												
OH52 8												■						
OH52 17												■						
OH52 1																		
OH52 4					●							■			▲			
OH52 5																		
OH52 11																		
OH52 12																		
OH52 14					●	■						■		▲	▲			
OH52 15																		
OH52 18												■						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewers	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH53 60.4																																				
OH53 1.1																																				
OH52 3						▲			▲													▲														
OH52 8	■					■																														
OH52 17																						▲														
OH52 1																																				
OH52 4	■																					▲			▲											
OH52 5																																				
OH52 11																																				
OH52 12																																				
OH52 14	■													●											●											▲
OH52 15																																				
OH52 18																																				■

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH52 8.1	11-217 – EAST FORK TODD FORK	4.00	WWH	0.5	0.0	0.0	0.0	3.5	0.0		8800	8300		■				
OH51 1	11-300 – CAESAR CREEK (CAESAR CREEK LAKE TO LITTLE MIA	13.90	WWH	13.9	0.0	0.0	0.0	0.0	0.0	Y	8800	8300	■					
OH51 13	11-300 – CAESAR CREEK (S. BR. CAESAR CR. TO CAESAR CR	9.90	WWH	0.5	0.0	0.0	0.0	9.4	0.0		8800	8300		■				
OH51 2	11-301 – FLAT FORK	3.70	WWH	0.0	0.0	0.0	0.5	3.2	0.5		8800	8300		■				
OH51 5	11-304 – TURKEY RUN	3.40	WWH	0.5	0.0	0.0	0.0	2.9	0.0		8800	8300		■				
OH51 6	11-305 – BUCK RUN	4.70	WWH	0.5	0.0	0.0	0.0	4.2	0.0		8800	8300		■				
OH51 7	11-306 – ANDERSON FORK (GROG RUN TO CAESAR CREEK LAKE)	11.00	EWH	11.0	0.0	0.0	0.0	0.0	0.0		8800	8400			■			
OH51 2.2	11-313 – HARLANS RUN	4.00	WWH	0.5	0.0	0.0	0.0	3.5	0.0		8800	8300		■				
OH51 2.1	11-314 – GUM RUN	3.00	WWH	0.5	0.0	0.0	0.0	2.5	0.0		8800	8200		■				
OH50 12	11-400 – MASSIES CREEK	10.00	WWH	7.7	0.0	0.0	2.3	0.0	2.3	Y	8800	8300	■					
OH50 13	11-401 – OLDTOWN CREEK	6.00	WWH	0.5	0.0	0.0	0.0	5.5	0.0		8800	8300	■					
OH84 1	12-001 – HURON RIVER (EAST BRANCH TO LAKE ERIE)	14.70	WWH	2.4	0.0	2.0	10.3	0.0	12.3	Y	8800	8400	■					
OH85 23	12-006 – CRANBERRY CREEK	3.00	WWH	3.0	0.0	0.0	0.0	0.0	0.0		8800	8400		■				

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH52 8.1																		
OH51 1																		
OH51 13																		
OH51 2												■						
OH51 5																		
OH51 6																		
OH51 7																		
OH51 2.2																		
OH51 2.1																		
OH50 12												■						
OH50 13					■													
OH84 1												▲		■				
OH85 23																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulatbn	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH52 8.1																																				
OH51 1																																				
OH51 13																																				
OH51 2						▲			▲																											
OH51 5																																				
OH51 6																																				
OH51 7																																				
OH51 2.2																																				
OH51 2.1																																				
OH50 12														■																						
OH50 13																																				■
OH84 1		▲																																	■	
OH85 23																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH85 22	12-007 – CHAPPEL CREEK	22.00	WWH	22.0	0.0	0.0	0.0	0.0	0.0		8800	8400		■				
OH85 21	12-008 – SUGAR CREEK	9.00	WWH	9.0	0.0	0.0	0.0	0.0	0.0		8800	8400		■				
OH85 20	12-009 – DARBY CREEK	6.00	WWH	6.0	0.0	0.0	0.0	0.0	0.0		8800	8400		■				
OH85 19	12-010 – SHEROD CREEK	0.80	WWH	0.8	0.0	0.0	0.0	0.0	0.0		8800	8400		■				
OH85 18.1	12-011 – TRIB. TO LAKE ERIE (BLUEBIRD BEACH)	2.00	WWH	0.0	0.0	0.0	2.0	0.0	2.0		8800	8400		■				
OH85 18.2	12-012 – TRIB. TO LAKE ERIE (BEULAH BEACH)	2.00	WWH	2.0	0.0	0.0	0.0	0.0	0.0		8800	8400		■				
OH85 18.3	12-013 – TRIB. TO LAKE ERIE (HEIDELBURG BEACH)	2.00	WWH	2.0	0.0	0.0	0.0	0.0	0.0		8800	8400		■				
OH84 7	12-100 – EAST BRANCH HURON R. (HEADWATERS TO NORWALK C	17.70	WWH	1.9	0.0	4.9	0.0	10.9	4.9		8800	8400	■					
OH84 3	12-102 – RATTLESNAKE CREEK	5.00	WWH	0.0	0.0	0.0	2.4	2.6	2.4	Y	8800	8400	■					
OH84 5	12-103 – NORWALK CREEK	5.00	WWH	0.0	0.0	0.0	1.8	3.2	1.8	Y	8800	8400	■					
OH84 3.1	12-104 – TRIB. TO RATTLESNAKE CREEK	6.00	WWH	0.0	0.0	0.0	6.0	0.0	6.0		8800	8400	■					
OH84 8	12-200 – WEST BRANCH HURON R. (SLATE RUN TO EAST BRANC	10.60	WWH	2.5	0.0	0.0	0.0	8.1	0.0		8800	8400	■					
OH84 20	12-200 – WEST BRANCH HURON RIVER (HEADWATERSTO MARSH R	14.20	WWH	3.2	0.0	0.0	4.8	6.2	4.8		8800	8500		■				

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH85 22																																																								
OH85 21																																																								
OH85 20																																																								
OH85 19																																																								
OH85 18.1																																																								
OH85 18.2																																																								
OH85 18.3																																																								
OH84 7													■																			■																								
OH84 3													■							■																																				
OH84 5													■																			■								▲															
OH84 3.1															■																																									■
OH84 8							■																	▲															▲																
OH84 20													■							■																				▲																

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH84 20.1	12-212 – TRIB. TO WEST BRANCH HURON RIVER	4.00	WWH	0.0	0.0	0.0	3.5	0.5	3.5		8800	8500		■				
OH87 2	13-001 – ROCKY RIVER	12.10	WWH	1.7	0.0	10.4	0.0	0.0	10.4	Y	8800	8100	■					
OH87 3	13-002 – ABRAM CREEK	7.40	WWH	0.0	0.0	0.0	7.4	0.0	7.4		8800	8100	■					
OH87 4	13-100 – EAST BRANCH ROCKY RIVER (HEALEY CREEK TO ROCK	17.00	WWH	7.0	0.0	7.1	2.9	0.0	10.0		8800	8100	■					
OH87 8	13-100 – EAST BRANCH ROCKY RIVER (HEADWATERS TO HEALEY	17.00	WWH	17.0	0.0	0.0	0.0	0.0	0.0		8800	8100	■					
OH87 5	13-101 – BALDWIN CREEK	9.20	WWH	0.0	0.0	0.0	9.2	0.0	9.2		8800	8100	■					
OH87 7	13-103 – NORTH ROYALTON "A" TRIB.	2.00	WWH	0.0	0.0	0.0	2.0	0.0	2.0		8800	8100	■					
OH87 9	13-104 – HEALEY CREEK	5.00	WWH	1.1	0.0	0.1	0.0	3.8	0.1		8800	8100	■					
OH87 8.1	13-105 – TRIB. TO E. BR. ROCKY R. (MEDINA #9)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8300		■				
OH87 8.2	13-107 – TRIB. TO E. BR. ROCKY RIVER (RM 29.1)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8300		■				
OH87 5.1	13-108 – TRIB. TO BALDWIN CREEK (RM 6.0)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8200		■				
OH87 10	13-200 – WEST BRANCH ROCKY RIVER (PLUM CR. TO EAST BRA	3.10	WWH	0.0	0.0	2.4	0.7	0.0	3.1		8800	8100	■					
OH87 12	13-200 – WEST BRANCH ROCKY RIVER (COSSETT CR. TO PLUM	16.50	WWH	4.9	0.0	1.0	10.6	0.0	11.6		8800	8100	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH84 20.1												■						
OH87 2					●	●						■						
OH87 3					●	■						■						
OH87 4					■	■						●						
OH87 8																		
OH87 5						●						■						
OH87 7						▲						■						
OH87 9												■						
OH87 8.1																		
OH87 8.2																		
OH87 5.1																		
OH87 10					▲	■						●						
OH87 12						●						■						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH84 20.1		■																																		
OH87 2	●	■												▲																						
OH87 3		■																			●															
OH87 4		■												■																						
OH87 8																																				
OH87 5		■												▲																						
OH87 7		■												▲																						
OH87 9		■												▲																						
OH87 8.1																																				
OH87 8.2																																				
OH87 5.1																																				
OH87 10		■												▲																						
OH87 12		■					▲																		●											

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH87 15	13-200 – WEST BRANCH ROCKY RIVER (NORTH BR. TO COSSETT	18.40	WWH	12.3	0.0	4.1	2.0	0.0	6.1	Y	8800	8100	■					
OH87 11	13-201 – PLUM CREEK	14.80	WWH	0.0	0.0	0.0	8.5	6.3	8.5		8800	8100	■					
OH87 19	13-205 – NORTH BRANCH ROCKY RIVER	5.80	WWH	5.8	0.0	0.0	0.0	0.0	0.0		8800	8100	■					
OH87 20	13-206 – PLUM CREEK	7.10	WWH	0.0	0.0	0.0	2.9	4.2	2.9		8800	8100	■					
OH87 13	13-209 – STRONGSVILLE "A" TRIB.	2.00	WWH	0.0	0.0	0.0	2.0	0.0	2.0		8800	8100	■					
OH87 18	13-210 – MONTVILLE LANDFILL TRIBUTARY	3.00	WWH	0.0	0.0	0.0	3.0	0.0	3.0		8800	8100		■				
OH87 21.1	13-211 – TRIB. TO GRANGER DITCH (MEDINA #11)	2.00	WWH	0.0	0.0	0.0	0.5	1.5	0.5		8800	8300		■				
OH87 15.1	13-212 – CHAMPIAN CREEK	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8300		■				
OH87 18.1	13-213 – EAST BRANCH MONTVILLE LANDFILL TRIB.	0.50	WWH	0.0	0.0	0.0	0.5	0.0	0.5		8800	8600		■				
OH87 18.2	13-214 – WEST BRANCH MONTVILLE LANDFILL TRIB.	0.50	WWH	0.0	0.0	0.0	0.5	0.0	0.5		8800	8600		■				
OH87 10.11	13-216 – TRIB. TO TRIB. TO W. BR. ROCKY R. (RM 1.78)	1.00	WWH	0.5	0.0	0.0	0.0	0.5	0.0		8800	8200		■				
OH87 10.1	13-217 – TRIB. TO W. BR. ROCKY R. (RM 1.78)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8200		■				
OH55 2	14-001 – GREAT MIAMI RIVER (INDIAN CREEK TO PLUM CREEK	8.00	WWH	0.8	0.0	7.2	0.0	0.0	7.2		8800	8200	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH87 15					■							●						
OH87 11												■						
OH87 19																		
OH87 20												■						
OH87 13												●			■			
OH87 18					■	●						■						
OH87 21.1												■						
OH87 15.1																		
OH87 18.1						■						■						
OH87 18.2						■						■						
OH87 10.11																		
OH87 10.1																		
OH55 2												■						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH87 15																					■															
OH87 11		■					▲															●														
OH87 19																																				
OH87 20							▲							▲																						
OH87 13		■												▲								▲														
OH87 18																					■															
OH87 21.1		■																																		
OH87 15.1																																				
OH87 18.1																					■															
OH87 18.2																					■															
OH87 10.11																																				
OH87 10.1																																				
OH55 2							■															▲														

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH55 11	14-001 – GREAT MIAMI R. (BOKENGEHALAS CR. TO INDIAN CR	5.90	WWH	0.9	0.0	2.1	2.9	0.0	5.0	Y	8800	8200	■					
OH55 20	14-001 – GREAT MIAMI R. (MUCHINIPPI CR. TO BOKENGEHALA	8.40	WWH	0.0	0.0	6.5	1.9	0.0	8.4	Y	8800	8200	■					
OH56 1	14-001 – GREAT MIAMI RIVER (LOST CREEK TO STILLWATER R	17.40	WWH	12.5	0.0	4.2	0.7	0.0	4.9	Y	8800	8200	■					
OH56 10	14-001 – GREAT MIAMI RIVER (SPRING CREEK TO LOST CREEK	9.30	WWH	6.8	0.0	2.1	0.4	0.0	2.5	Y	8800	8200	■					
OH56 12	14-001 – GREAT MIAMI RIVER (LORAMIE CREEK TO SPRING CR	10.60	WWH	6.3	0.0	3.2	1.1	0.0	4.3		8800	8200	■					
OH56 36	14-001 – GREAT MIAMI RIVER (PLUM CREEK TO LORAMIE CREE	12.20	WWH	11.9	0.0	0.3	0.0	0.0	0.3	Y	8800	8200	■					
OH60 1	14-001 – GREAT MIAMI RIVER (FOURMILE CREEK TO DRY RUN)	12.80	WWH	0.0	0.0	1.0	11.8	0.0	12.8	Y	8800	8000	■					
OH60 9	14-001 – GREAT MIAMI R.(DICKS CR TO FOURMILE CR)	9.20	WWH	0.0	0.0	2.9	6.3	0.0	9.2	Y	8800	8000	■					
OH60 18	14-001 – GREAT MIAMI RIVER (TWIN CREEK TO DICKS CREEK)	9.80	WWH	0.0	0.0	0.8	9.0	0.0	9.8	Y	8800	8000	■					
OH60 33	14-001 – GREAT MIAMI RIVER (WOLF CREEK TO BEAR CREEK)	12.60	WWH	1.2	0.0	4.3	7.1	0.0	12.6	Y	8800	8000	■					
OH60 41	14-001 – GREAT MIAMI RIVER (STILLWATER RIVER TO WOLF C	2.40	WWH	0.0	0.0	2.4	0.0	0.0	2.4	Y	8800	8000	■					
OH62 1	14-001 – GREAT MIAMI RIVER (TAYLOR CREEK TO OHIO RIVER	15.00	WWH	0.0	0.0	7.3	7.7	0.0	15.0	Y	8800	8000	■					
OH62 13	14-001 – GREAT MIAMI RIVER (DRY RUN TO TAYLOR CREEK)	10.60	WWH	0.0	0.0	10.6	0.0	0.0	10.6		8800	8000	■					

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH55 11												■			▲					●					■																			▲												
OH55 20						■						■			●					■																							●												
OH56 1						●						■							●	■							▲					●																							
OH56 10					●	■						●			▲				●	■																								▲											
OH56 12					■	■						■	▲		▲				■	■												●																								
OH56 36												■								■																																				
OH60 1			▲		■			■				●		▲	●				●	●												▲								■				●	▲										
OH60 9					■			▲				■							■	■																																			
OH60 18					■	●						■		▲	▲				■	■																								▲	▲										
OH60 33					■	●						■			▲					■												●													▲										
OH60 41					■	■						■			▲				●													■													▲										
OH62 1											●	■			■	●			●	■																								■										
OH62 13												■							●	■																																			

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH55 34	14-001 – GREAT MIAMI RIVER (INDIAN LAKE TO MUCHINIPPI	5.00	WWH	5.0	0.0	0.0	0.0	0.0	0.0		9002	8809				■		
OH60 21	14-001 – GREAT MIAMI RIVER (BEAR CREEK TO TOWN CREEK)	10.20	WWH	0.0	0.0	7.4	2.8	0.0	10.2		9002	8909	■					
OH62 12	14-004 – TAYLOR CREEK	8.40	WWH	0.5	0.0	0.0	0.0	7.9	0.0		8800	8200			■			
OH62 14	14-005 – PADDY'S RUN	6.40	WWH	0.5	0.0	0.0	0.0	5.9	0.0		8800	8000			■			
OH62 15	14-006 – BLUEROCK CREEK	5.00	WWH	0.0	0.0	0.5	0.0	4.5	0.5		8800	8700		■				
OH62 16	14-007 – OWL CREEK	2.30	WWH	2.3	0.0	0.0	0.0	0.0	0.0		8800	8600			■			
OH60 2	14-010 – INDIAN CREEK	22.90	EWH	0.9	0.0	5.0	4.4	12.6	9.4	Y	8800	8500	■					
OH60 4	14-012 – BANKLICK CREEK	5.00	WWH	0.5	0.0	0.0	0.0	4.5	0.0		8800	8600			■			
OH60 5	14-013 – PLEASANT RUN	5.90	WWH	0.5	0.0	0.0	0.0	5.4	0.0		8800	8000			■			
OH60 7	14-015 – TWO MILE CREEK	4.00	WWH	0.5	0.0	0.0	0.0	3.5	0.0		8800	8200			■			
OH60 12	14-016 – GREGORY CREEK(HDWTRS TO GREAT MIAMI R.)	8.00	WWH	0.5	0.0	0.0	0.0	7.5	0.0		8800	8200			■			
OH60 14	14-018 – DICKS CREEK(HDWTRS TO GREAT MIAMI R.)	10.50	MWH	5.2	0.0	2.6	2.7	0.0	0.0	Y	8800	8700	■					
OH60 17	14-019 – NORTH BRANCH	5.60	WWH	0.5	0.0	0.0	5.1	0.0	5.1		8800	8700	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH55 34																		
OH60 21												■	●					
OH62 12																		
OH62 14																		
OH62 15	■											■						
OH62 16																		
OH60 2								●			●	■						
OH60 4																		
OH60 5																		
OH60 7																		
OH60 12																		
OH60 14	●				■				▲		●				●			
OH60 17											●	▲			■			

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Talings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH55 34																																				
OH60 21	▲	■																								●										
OH62 12																																				
OH62 14																																				
OH62 15		■												▲																						
OH62 16																																				
OH60 2		■					●																													
OH60 4																																				
OH60 5																																				
OH60 7																																				
OH60 12																																				
OH60 14	■																								●				●							
OH60 17														●											■											

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH60 15	14-020 – SHAKER CREEK	8.70	WWH	0.1	0.0	0.0	8.6	0.0	8.6		8800	8700	■					
OH60 19	14-022 – ELK CREEK	12.60	EWH	12.6	0.0	0.0	0.0	0.0	0.0		8800	8700		■				
OH60 22	14-024 – CLEAR CREEK	11.00	WWH	2.5	0.0	0.8	2.1	5.6	2.9		8800	8700		■				
OH60 27	14-029 – BEAR CREEK	14.40	WWH	9.2	0.0	0.0	2.9	2.3	2.9		8800	8100	■					
OH60 34	14-035 – OPOSSUM CREEK	3.70	WWH	0.5	0.0	0.0	0.0	3.2	0.0		8800	8000			■			
OH60 35	14-036 – HOLES CREEK	9.00	WWH	0.5	0.0	0.0	0.0	8.5	0.0		8800	8000			■			
OH60 36	14-037 – WOLF CREEK	16.70	WWH	1.4	0.0	0.0	3.3	12.0	3.3		8800	8700		■				
OH56 3	14-043 – HONEY CREEK	18.60	EWH	3.4	0.0	6.6	0.0	8.6	6.6		8800	8200	■					
OH56 6	14-046 – WEST FORK HONEY CREEK	4.30	WWH	0.5	0.0	0.0	0.0	3.8	0.0		8800	8000			■			
OH56 8	14-048 – LOST CREEK	17.40	EWH	0.5	0.0	9.2	0.0	7.7	9.2		8800	8200	■					
OH56 11	14-050 – SPRING CREEK	12.40	EWH	0.0	0.0	1.1	0.0	11.3	1.1		8800	8300	■					
OH56 37	14-058 – MILL BRANCH	4.20	WWH	0.5	0.0	0.0	0.0	3.7	0.0		8800	8200			■			
OH56 38	14-059 – BRUSH CREEK	3.40	WWH	0.5	0.0	0.0	0.0	2.9	0.0		8800	8200			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH60 15											●	■		▲	●			
OH60 19																		
OH60 22												■						
OH60 27						■						■						
OH60 34																		
OH60 35																		
OH60 36												■						
OH56 3						■												
OH56 6																		
OH56 8														■				
OH56 11												■						
OH56 37																		
OH56 38																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH60 15		■																						●		▲			●							
OH60 19																																				
OH60 22		■																				▲														
OH60 27		■																				▲														
OH60 34																																				
OH60 35																																				
OH60 36		■																				▲											■			
OH56 3							▲		▲																											
OH56 6																																				
OH56 8							▲																													
OH56 11							▲		■																											
OH56 37																																				
OH56 38																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH56 39	14-060 – TAWAWA CREEK	15.70	WWH	0.0	0.0	0.0	3.7	12.0	3.7		8800	8200	■					
OH55 15	14-072 – STONY CREEK (HEADWATERS TO LEE/GRAVE CREEK)	6.80	WWH	3.2	0.0	1.1	0.0	2.5	1.1		8800	8200	■					
OH55 16	14-075 – MCKEE CREEK	10.20	EWH	0.0	0.0	0.0	0.5	9.7	0.5		8800	8200	■					
OH55 17	14-076 – BOKENGEHALAS CREEK	15.40	WWH	3.1	0.0	0.0	1.0	11.3	1.0		8800	8200		■				
OH55 18	14-077 – BLUEJACKET CREEK	7.80	WWH	0.0	0.0	0.6	5.8	1.4	6.4		8800	8200		■				
OH55 35	14-084 – CHEROKEE MANS RUN	10.80	WWH	3.0	0.0	1.0	0.0	6.8	1.0		9002	8809		■				
OH55 19	14-085 – OPOSSUM RUN	1.00	WWH	0.0	0.0	0.0	1.0	0.0	1.0		8800	8200		■				
OH60 33.1	14-089 – OWL CREEK	2.00	LRW	0.5	0.0	0.0	0.0	1.5	0.0		8800	8600			■			
OH60 2.1	14-090 – TRIB. TO INDIAN CREEK (QUEEN ACRES)	2.00	WWH	2.0	0.0	0.0	0.0	0.0	0.0		8800	8500			■			
OH56 8.1	14-091 – GUSTIN DITCH	4.00	WWH	0.0	0.0	0.0	0.5	3.5	0.5		8800	8400			■			
OH55 34.1	14-092 – TRIB. TO GREAT MIAMI R. (RM 157.3)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8000			■			
OH56 1.1	14-093 – TRIB. TO GREAT MIAMI RIVER (96.4)	2.00	WWH	0.0	0.0	0.0	2.0	0.0	2.0		8800	8000			■			
OH60 22.1	14-094 – TRIB. TO CLEAR CREEK (RM 7.1)	3.00	WWH	0.0	0.0	0.0	0.5	2.5	0.5		8800	8000			■			

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Talings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH56 39												●	■											▲		■														●														
OH55 15																																																							
OH55 16							■																																																■
OH55 17					■							●			●					■				▲																		●												
OH55 18					■							●			▲				▲	■				▲																		▲												
OH55 35	■																																																						■
OH55 19					■									●						■												●																							●
OH60 33.1					■		■												■																																				
OH60 2.1																																																							
OH56 8.1													■																			■																							
OH55 34.1																																																							
OH56 1.1							■						■							■																																			
OH60 22.1							■													■																																			

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH56 10.3	14-095 – B.F. GOODRICH TRIB	1.00	WWH	0.0	0.0	0.0	1.0	0.0	1.0		9002	8607		■				
OH56 10.2	14-096 – PETERS CREEK	2.00	WWH	2.0	0.0	0.0	0.0	0.0	0.0		9002	8607		■				
OH56 10.1	14-097 – TRIB. TO GREAT MIAMI RIVER (103.9)	3.00	WWH	0.5	0.0	0.0	0.0	2.5	0.0		8800	8200			■			
OH58 1	14-100 – MAD RIVER (MUD RUN TO GREAT MIAMI RIVER)	10.10	WWH	0.4	0.0	9.0	0.7	0.0	9.7	Y	8800	8400	■					
OH58 4	14-100 – MAD RIVER (DONNELS CREEK TO MUD RUN)	8.30	WWH	0.0	0.0	8.3	0.0	0.0	8.3	Y	8800	8400	■					
OH58 11	14-100 – MAD RIVER (BUCK CREEK TO DONNELS CREEK)	7.70	WWH	0.0	0.0	2.1	5.6	0.0	7.7	Y	8800	8400	■					
OH58 21	14-100 – MAD RIVER (CHAPMAN CREEK TO BUCK CREEK)	6.50	CWH	0.0	6.5	0.0	0.0	0.0	0.0	Y	8800	8400	■					
OH58 29	14-100 – MAD RIVER (NETTLE CREEK TO CHAPMAN CREEK)	4.60	CWH	0.0	4.6	0.0	0.0	0.0	0.0	Y	8800	8400	■					
OH58 43	14-100 – MAD RIVER (KINGS CREEK TO NETTLE CREEK)	6.60	CWH	0.0	6.6	0.0	0.0	0.0	0.0	Y	8800	8600	■					
OH58 48	14-100 – MAD RIVER (MACOCHEE CREEK TO KINGS CREEK)	8.00	CWH	0.0	5.4	2.6	0.0	0.0	2.6	Y	8800	8600	■					
OH58 51	14-100 – MAD RIVER (HEADWATERS TO MACOCHEE CREEK)	10.20	CWH	0.0	9.7	0.5	0.0	0.0	0.5	Y	8800	8600	■					
OH58 15	14-110 – BUCK CREEK (BEAVER CREEK TO MAD RIVER)	6.00	WWH	0.0	0.0	0.0	6.0	0.0	6.0	Y	8800	8400	■					
OH58 18	14-110 – BUCK CREEK (EAST FORK BUCK CREEK TO BEAVER CR	6.20	WWH	0.0	0.0	0.0	1.1	5.1	1.1	Y	8800	8400	■					

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulatibn	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH56 10.3					■														■																																					
OH56 10.2																																																								
OH56 10.1																																																								
OH58 1						●						■			●				▲	■												▲											●													
OH58 4	■											●								■																																				
OH58 11	●					●						■								■																																				
OH58 21																																																								
OH58 29																																																								
OH58 43																																																								
OH58 48					■							▲								▲																														■						
OH58 51											■								■																																						
OH58 15											▲	■			●																	■												●	●											
OH58 18												■		■																														■	■											

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH58 20	14-110 – BUCK CREEK (HEADWATERS TO EAST FORK BUCK CREE	5.20	CWH	0.5	0.0	0.0	0.0	4.7	0.0		8800	8400			■			
OH58 16	14-111 – BEAVER CREEK (HEADWATERS TO BUCK CREEK)	14.50	CWH	0.0	0.0	0.5	0.0	14.0	0.5		8800	8400	■					
OH58 19	14-113 – EAST FORK BUCK CREEK	6.40	CWH	0.5	0.0	0.0	0.0	5.9	0.0		8800	8400			■			
OH58 24	14-117 – MOORE RUN	8.10	CWH	1.2	0.0	3.1	3.8	0.0	6.9	Y	8800	8400	■					
OH58 25	14-120 – CHAPMAN CREEK	10.00	WWH	0.0	0.5	0.0	4.0	5.5	4.0		8800	8400	■					
OH58 44	14-128 – DUGAN RUN	4.50	WWH	0.5	0.0	0.0	0.0	4.0	0.0	Y	8800	8400			■			
OH58 45	14-129 – MUDDY CREEK	9.00	WWH	3.1	0.0	0.0	0.0	5.9	0.0		8800	8100			■			
OH58 36	14-130 – NETTLE CREEK	11.50	CWH	4.7	0.0	4.5	2.3	0.0	6.8		8800	8100	■					
OH58 47	14-136 – KINGS CREEK	9.00	CWH	4.9	0.0	3.3	0.8	0.0	4.1	Y	8800	8600	■					
OH58 49	14-137 – GLADY CREEK	7.70	CWH	1.1	0.0	0.0	0.0	6.6	0.0	Y	8800	8600	■					
OH58 50	14-138 – MACOCHEE CREEK	3.50	CWH	3.5	0.0	0.0	0.0	0.0	0.0		8800	8400			■			
OH58 52	14-139 – MACOCHEE CREEK	8.20	CWH	0.0	8.2	0.0	0.0	0.0	0.0	Y	8800	8600	■					
OH58 42	14-140 – ST. PARIS TRIBUTARY	3.00	WWH	0.0	0.0	0.0	2.6	0.4	2.6		8800	8100	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH58 20																		
OH58 16											■							
OH58 19																		
OH58 24											■				■			
OH58 25					▲		●				■							
OH58 44																		
OH58 45																		
OH58 36											■			■				
OH58 47											■				●			
OH58 49															■			
OH58 50																		
OH58 52																		
OH58 42							■					■						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH58 20																																				
OH58 16						■																														
OH58 19																																				
OH58 24						▲																		■												
OH58 25																					■															
OH58 44																																				
OH58 45																																				
OH58 36						■		●																												■
OH58 47								■																				▲	●							
OH58 49						▲		▲																■												
OH58 50																																				
OH58 52																																				
OH58 42			■					▲																												

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Biosurvey-A	Intensive Biosurvey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH58 24.1	14-143 – KENTON CREEK	5.00	WWH	0.0	0.0	0.0	5.0	0.0	5.0		8800	8400	■					
OH58 48.1	14-144 – WEST LIBERTY WWTP TRIB.	5.00	WWH	3.0	0.0	0.0	0.0	2.0	0.0		8800	8400	■					
OH58 20.1	14-145 – DUGAN DITCH	8.00	WWH	0.5	0.0	0.0	0.0	7.5	0.0		8800	8400			■			
OH57 1	14-200 – STILLWATER RIVER (BRUSH CREEK TO GREAT MIAMI	14.20	EWH	0.0	0.0	10.5	3.7	0.0	14.2	Y	8800	8200	■					
OH57 5	14-200 – STILLWATER RIVER (LUDLOW CREEK TO BRUSH CREEK	6.80	EWH	3.6	0.0	3.0	0.2	0.0	3.2		8800	8200	■					
OH57 14	14-200 – STILLWATER RIVER (GREENVILLE CR. TO LUDLOW CR	11.40	EWH	6.4	0.0	5.0	0.0	0.0	5.0		8800	8200	■					
OH57 37	14-200 – STILLWATER RIVER (SWAMP CREEK TO GREENVILLE C	13.50	EWH	0.0	0.0	4.9	8.6	0.0	13.5	Y	8800	8200	■					
OH57 43	14-200 – STILLWATER RIVER (NORTH FORK TO SWAMP CREEK)	2.10	EWH	0.0	0.0	0.0	2.1	0.0	2.1		8800	8200	■					
OH57 45	14-200 – STILLWATER RIVER (HEADWATERS TO NORTH FORK)	17.00	EWH	0.0	0.0	1.8	13.2	2.0	15.0	Y	8800	8200	■					
OH57 4	14-203 – BRUSH CREEK	6.00	EWH	0.7	0.0	0.0	0.0	5.3	0.0		8800	8200	■					
OH57 18	14-208 – PAINTER CREEK	17.00	WWH	0.0	0.0	0.0	17.0	0.0	17.0		8800	8200	■					
OH57 7	14-210 – LUDLOW CREEK	13.50	WWH	0.3	0.0	12.8	0.4	0.0	13.2		8800	8200	■					
OH57 8	14-211 – BRUSH CREEK	8.00	WWH	0.0	0.0	0.5	3.1	4.4	3.6	Y	8800	8200		■				

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH58 24.1						■						■		●						■																																				●
OH58 48.1																																																							
OH58 20.1																																																							
OH57 1						●						■								■												●																							
OH57 5						●						■								■																																			
OH57 14												■								■																								▲	▲									
OH57 37	●											■								■																		●																	
OH57 43												■								■																																			
OH57 45											●	■		●						■												●							▲				●											
OH57 4						■																																																	■
OH57 18					▲							■			■				▲	■												■									▲		■											
OH57 7					■														■																																			
OH57 8						▲						■		▲					■																					▲															▲

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Biosurvey-A	Intensive Biosurvey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH57 38	14-218 – HARRIS RUN	9.10	WWH	1.5	0.0	0.0	3.8	3.8	3.8		8800	8200	■					
OH57 39	14-219 – BALLINGER RUN	2.00	WWH	0.0	0.0	0.0	2.0	0.0	2.0	Y	8800	8200	■					
OH57 21	14-220 – GREENVILLE CREEK (DIVIDING BR. TO STILLWATER	15.20	EWH	0.0	0.0	14.0	1.2	0.0	15.2	Y	8800	8200	■					
OH57 26	14-220 – GREENVILLE CREEK (WEST BR. TO DIVIDING BR.)	9.10	EWH	0.0	0.0	1.9	7.2	0.0	9.1	Y	8800	8200	■					
OH57 32	14-220 – GREENVILLE CREEK (HEADWATERS TO WEST BRANCH)	11.20	EWH	0.0	0.0	7.9	3.3	0.0	11.2		8800	8200	■					
OH57 35	14-232 – DISMAL CREEK	9.50	WWH	0.7	0.0	0.0	0.0	8.8	0.0		8800	8200	■					
OH57 41	14-235 – SWAMP CREEK	13.80	WWH	0.0	0.0	0.5	4.0	9.3	4.5		8800	8200	■					
OH57 42	14-236 – INDIAN CREEK	5.20	WWH	0.0	0.0	0.0	2.0	3.2	2.0		8800	8200	■					
OH57 46	14-238 – NORTH FORK STILLWATER RIVER	7.70	WWH	0.5	0.0	0.4	0.0	6.8	0.4		8800	8200	■					
OH57 18.1	14-241 – SYCAMORE DITCH	1.00	WWH	0.0	0.0	0.0	1.0	0.0	1.0		8800	8200	■					
OH57 1.1	14-242 – TRIB. TO STILLWATER RIVER (RM 11.7)	1.00	WWH	0.0	0.0	0.0	0.5	0.5	0.5		8800	8200			■			
OH62 3	14-300 – WHITEWATER RIVER (OHIO/INDIANA TO GREAT MIAMI	8.20	WWH	0.0	0.0	1.8	6.4	0.0	8.2		8800	8000	■					
OH61 5	14-308 – E. FK. WHITEWATER R. (HEADWATERS TO OHIO/INDA	11.10	WWH	0.0	0.0	4.3	6.8	0.0	11.1		8800	8200	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH57 38												■			●			
OH57 39						●						■						
OH57 21												■						
OH57 26						●						■			▲			
OH57 32											●	■						
OH57 35												■						
OH57 41						●						■			●			
OH57 42															■			
OH57 46												■			●			
OH57 18.1						▲						■						
OH57 1.1						■						■						
OH62 3						▲								■				
OH61 5						■						■			■			

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH57 38						●	●																	■												
OH57 39		●				▲	▲							■								●														
OH57 21	▲	■												●																						
OH57 26	▲	■												●												▲										
OH57 32		●				■																														
OH57 35		■				●																														
OH57 41		■				▲																		●			▲									
OH57 42																								■			●									
OH57 46		▲												■										●												
OH57 18.1		■												▲																						
OH57 1.1		■																																		
OH62 3		▲																								■										
OH61 5		●																				■		■												

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH62 3.2	14-317 – WELKER LATERAL	2.00	WWH	1.1	0.0	0.0	0.5	0.4	0.5		8800	8200	■					
OH62 3.1	14-318 – UNNAMED TRIBUTARY @RM 49.5	3.10	WWH	0.0	0.0	0.0	0.5	2.6	0.5		8800	8100			■			
OH62 5.1	14-319 – KIATA CREEK	4.00	WWH	0.8	0.0	0.0	0.5	2.7	0.5		9002	8906				■		
OH61 11	14-400 – FOURMILE CREEK (SEVENMILE CREEK TO GREAT MIAM	3.70	WWH	3.6	0.0	0.1	0.0	0.0	0.1	Y	8800	8100	■					
OH61 24	14-400 – FOURMILE CREEK (L. FOURMILE CR. TO SEVENMILE	20.20	WWH	17.7	0.0	1.3	1.2	0.0	2.5		8800	8100	■					
OH61 12	14-410 – SEVENMILE CREEK (PAINT CREEK TO FOURMILE CR.)	15.20	EWH	1.0	0.0	0.0	0.3	13.9	0.3	Y	8800	8100	■					
OH59 3	14-500 – TWIN CREEK (BANTAS FORK TO LITTLE TWIN CREEK)	17.60	EWH	3.1	0.0	14.5	0.0	0.0	14.5		8800	8600	■					
OH59 10	14-500 – TWIN CREEK (PRICE CREEK TO BANTAS FORK)	5.40	EWH	0.0	0.0	4.4	1.0	0.0	5.4		8800	8600	■					
OH59 15	14-500 – TWIN CREEK (HEADWATERS TO PRICE CREEK)	20.30	EWH	0.0	0.0	0.5	12.0	7.8	12.5	Y	8800	8600	■					
OH59 1	14-500 – TWIN CREEK (LITTLE TWIN CREEK TO GREAT MIAMI)	6.70	EWH	6.7	0.0	0.0	0.0	0.0	0.0		9002	8809	■					
OH59 2	14-501 – LITTLE TWIN CREEK	7.80	WWH	2.3	0.0	4.7	0.0	0.8	4.7		8800	8600	■					
OH59 7	14-505 – BANTAS FORK	16.80	EWH	5.1	0.0	3.4	0.0	8.3	3.4		8800	8600	■					
OH59 2.1	14-516 – REIGLE DITCH	2.00	WWH	0.0	0.0	1.6	0.4	0.0	2.0	Y	8800	8600	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH62 3.2												■			●			
OH62 3.1												■						
OH62 5.1															■			
OH61 11															■			
OH61 24						■	▲											
OH61 12						■												
OH59 3												■						
OH59 10												●			■			
OH59 15												■						
OH59 1																		
OH59 2												●		■				
OH59 7																		
OH59 2.1						■						■		●				

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulatbn	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH62 3.2						■																		●												
OH62 3.1																						■														
OH62 5.1																										■										
OH61 11						▲																		■												
OH61 24	■																																			
OH61 12						▲		▲														▲														
OH59 3	■					▲																														
OH59 10	●																											■								
OH59 15	■					▲		■																					▲							
OH59 1																																				
OH59 2	●																																			■
OH59 7																																				
OH59 2.1	■																																			●

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Biosurvey-A	Intensive Biosurvey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH56 20	14-600 – LORAMIE CREEK (TURTLE CREEK TO GREAT MIAMI R)	4.10	WWH	0.5	0.0	0.0	0.0	3.6	0.0	Y	8800	8200			■			
OH56 27	14-606 – NINEMILE CREEK	6.60	WWH	0.5	0.0	0.0	0.0	6.1	0.0	Y	8800	8600		■				
OH56 32.1	14-614 – CLAY CREEK	5.00	WWH	0.0	0.0	0.0	4.5	0.5	4.5		8800	8700			■			
OH55 27	14-700 – MUCHINIPPI CREEK	13.70	WWH	0.0	0.0	13.7	0.0	0.0	13.7		8800	8200	■					
OH55 36	14-800 – S. FK. GREAT MIAMI R. (HEADWATERS TO INDIAN L	10.20	WWH	4.2	0.0	4.4	1.6	0.0	6.0		9002	8809		■				
OH55 38	14-801 – SLOW DITCH (LIGGITT DITCH)	3.70	WWH	0.0	0.0	0.0	0.5	3.2	0.5		8800	8200	■					
OH55 43	14-802 – N. FK. GREAT MIAMI RIVER	15.00	WWH	0.0	0.0	0.0	15.0	0.0	15.0		9002	8809		■				
OH55 42	14-803 – BLACKHAWK RUN	3.00	WWH	0.0	0.0	0.0	3.0	0.0	3.0		9002	8809		■				
OH55 41	14-804 – VAN HORN CREEK	3.00	WWH	0.0	0.0	0.0	3.0	0.0	3.0		9002	8809		■				
OH55 36.1	14-805 – BELLE CENTER TRIBUTARY	3.00	WWH	0.0	0.0	0.0	0.6	2.4	0.6		9002	8809		■				
OH55 37	14-806 – NEW RICHLAND TRIBUTARY	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8200			■			
OH90 5	15-001 – CHAGRIN RIVER (EAST BRANCH TO LAKE ERIE)	5.00	WWH	0.0	0.0	0.0	5.0	0.0	5.0		9002	8809	■					
OH90 7	15-001 – CHAGRIN RIVER (AURORA BRANCH TO EAST BRANCH)	22.10	WWH	0.0	14.6	7.5	0.0	0.0	7.5		9002	8609	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH56 20																		
OH56 27																		
OH56 32.1												■						
OH55 27															■			
OH55 36												■						
OH55 38												■		●				
OH55 43									▲			▲	▲	■	■			
OH55 42	●								●		●	●		■	■			
OH55 41									●		●	●		■	■			
OH55 36.1											●	■			●			
OH55 37																		
OH90 5															■			■
OH90 7												■						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH56 20																																				
OH56 27																																				
OH56 32.1		■																																		
OH55 27							▲																	■												
OH55 36																						■														
OH55 38																						■														●
OH55 43							●																	■			●		■							
OH55 42							●																	■					■							●
OH55 41							●																	■					■							
OH55 36.1							●															■					●									
OH55 37																																				
OH90 5																									■											■
OH90 7		■																																		

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH90 12	15-001 – CHAGRIN RIVER (HEADWATERS TO AURORA BRANCH)	22.90	WWH	0.0	22.0	0.9	0.0	0.0	0.9		9002	8609	■					
OH90 6	15-002 – EAST BRANCH CHAGRIN RIVER	19.40	CWH	18.2	0.0	0.0	0.0	1.2	0.0		8800	8600		■				
OH90 9	15-004 – WILLEY CREEK	2.70	EWH	0.0	0.5	0.0	0.5	1.7	0.5		8800	8600			■			
OH90 10	15-005 – AURORA BRANCH	16.10	WWH	0.0	16.1	0.0	0.0	0.0	0.0	Y	8800	8600	■					
OH90 7.1	15-011 – CAVES CREEK	3.00	WWH	0.5	0.0	0.0	0.0	2.5	0.0		8800	8600		■				
OH78 3	16-001 – PORTAGE RIVER (SUGAR CREEK TO LAKE ERIE)	17.50	WWH	0.0	2.0	15.5	0.0	0.0	15.5		8800	8500	■					
OH78 9	16-001 – PORTAGE RIVER (NORTH BRANCH TO SUGAR CREEK)	17.70	WWH	17.7	0.0	0.0	0.0	0.0	0.0	Y	8800	8500	■					
OH77 10	16-007 – NORTH BRANCH PORTAGE RIVER	25.80	WWH	0.5	0.0	0.0	0.0	25.3	0.0		8800	8400				■		
OH77 9	16-100 – SOUTH BRANCH (HEADWATERS TO E. BR. PORTAGE R)	27.50	WWH	1.1	0.0	0.0	0.0	26.4	0.0		9001	8810	■					
OH77 4	16-103 – ROCKY FORD	22.90	WWH	5.1	0.0	0.0	17.8	0.0	17.8		8800	8500	■					
OH77 8	16-105 – EAST BRANCH PORTAGE RIVER	18.00	WWH	0.0	0.0	0.0	18.0	0.0	18.0		9001	8810	■					
OH77 4.1	16-106 – KOA TRIB.	2.00	WWH	2.0	0.0	0.0	0.0	0.0	0.0		8800	8500				■		
OH77 4.2	16-107 – AIR PRODUCTS TRIB.	2.00	WWH	0.5	0.0	0.0	1.5	0.0	1.5		8800	8500		■				

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH90 12					■							■						
OH90 6																		
OH90 9	■											●						
OH90 10																		
OH90 7.1																		
OH78 3											■	●						
OH78 9																		
OH77 10												■						
OH77 9																		
OH77 4					■	■						■						
OH77 8	●											■		●				
OH77 4.1																		
OH77 4.2					■							●						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH90 12	■																																■			
OH90 6																																				
OH90 9		■																																		
OH90 10																																				
OH90 7.1																																				
OH78 3	●	●				■																														
OH78 9																																				
OH77 10		■				▲																														
OH77 9																																				
OH77 4	■	■				▲																														
OH77 8	●		■																																	
OH77 4.1																																				
OH77 4.2	■																																			

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Biosurvey-A	Intensive Biosurvey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH76 24	16-200 – OTTER CREEK	8.00	WWH	0.0	0.0	0.0	8.0	0.0	8.0		8800	8600	■					
OH76 18	16-202 – CEDAR CREEK	22.00	WWH	22.0	0.0	0.0	0.0	0.0	0.0		8800	8600	■					
OH76 11	16-205 – CRANE CREEK	21.00	WWH	0.0	0.0	0.0	0.5	20.5	0.5		8800	8400		■				
OH76 12	16-206 – AYERS CREEK	6.00	WWH	0.0	0.0	0.0	6.0	0.0	6.0		8800	8400		■				
OH76 14	16-208 – HENRY CREEK	9.00	WWH	0.0	0.0	0.0	9.0	0.0	9.0		8800	8400		■				
OH76 4	16-215 – TOUSSAINT CREEK	17.90	WWH	11.8	0.0	0.0	0.0	6.1	0.0		8800	8600		■				
OH76 5	16-215 – TOUSSAINT CREEK (HEADWATERS TO TRIB. E. OF GE	12.10	WWH	1.0	0.0	0.0	1.0	10.1	1.0		8800	8700		■				
OH76 3	16-216 – PACKER CREEK	24.40	WWH	0.0	0.0	0.0	0.5	23.9	0.5		8800	8600		■				
OH23 48	17-001 – MUSKINGUM RIVER (SYMMES CREEK TO LICKING R.)	10.90	WWH	8.5	0.0	2.4	0.0	0.0	2.4		9002	8810	■					
OH23 15	17-001 – MUSKINGUM RIVER (LICKING RIVER TO SALT CREEK)	9.20	WWH	9.2	0.0	0.0	0.0	0.0	0.0		9002	8810	■					
OH24106	17-001 – MUSKINGUM RIVER (SALT CREEK TO MILLER RUN)	16.50	WWH	5.0	0.0	6.6	1.1	3.8	7.7		9002	8810	■					
OH24 92	17-001 – MUSKINGUM RIVER (MILLERS RUN TO MEIGS CREEK)	21.10	WWH	0.0	7.0	12.0	1.6	0.5	13.6		9002	8810	■					
OH24 17	17-001 – MUSKINGUM RIVER (MEIGS CREEK TO BIG RUN)	12.20	WWH	0.0	0.0	8.1	0.5	3.6	8.6		9002	8810	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH76 24	■		●	■				■										
OH76 18																		
OH76 11				●								■						
OH76 12				●								■						
OH76 14				■								●						
OH76 4																		
OH76 5															■			
OH76 3												■						
OH23 48												●	■		▲			
OH23 15																		
OH24106			■	■														■
OH24 92			■	■														
OH24 17													■					

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH76 24	■																			▲	■												■			
OH76 18																																				
OH76 11						▲																▲														
OH76 12						▲																▲														
OH76 14						▲																▲														
OH76 4																																				
OH76 5																								■												
OH76 3						▲															▲	▲														
OH23 48	■																																	▲		
OH23 15																																				
OH24106	■																																			■
OH24 92	■																																			
OH24 17	■																																	▲		

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH24 1	17-001 – MUSKINGUM RIVER (BIG RUN TO OHIO RIVER)	17.20	WWH	14.0	0.0	3.2	0.0	0.0	3.2		9002	8810	■					
OH20 22	17-001 – MUSKINGUM RIVER (TUSC/WALHOND. R. TO WILLS C)	11.80	WWH	9.0	0.0	2.8	0.0	0.0	2.8		9002	8810	■					
OH20 1	17-001 – MUSKINGUM RIVER (WILLS CREEK TO SYMMES CREEK)	12.20	WWH	6.0	0.0	1.0	1.0	4.2	2.0		9002	8810	■					
OH24 27	17-035 – SOUTH BRANCH WOLF CREEK	25.40	EWH	1.1	0.0	0.1	0.0	24.2	0.1		8800	8400			■			
OH24 36	17-044 – WEST BR. WOLF CREEK (LAUREL RUN TO MUSKINGUM)	12.90	EWH	0.0	0.0	12.9	0.0	0.0	12.9		8800	8400			■			
OH24 40	17-044 – WEST BR. WOLF CREEK (HEADWATERS TO LAUREL RN)	32.10	EWH	1.0	0.0	0.1	0.9	30.1	1.0		8800	8400			■			
OH24 61	17-070 – OLIVE GREEN CREEK	22.00	EWH	0.5	0.0	0.5	0.5	20.5	1.0		8800	8400			■			
OH12 1	17-100 – CONOTTON CREEK	12.00	WWH	0.5	0.0	0.0	0.0	11.5	0.0		8800	8600		■				
OH12 13	17-100 – CONOTTON CREEK	24.40	WWH	1.0	0.0	14.1	3.1	6.2	17.2	Y	8800	8300			■			
OH12 19	17-100 – CONOTTON CREEK	8.60	WWH	8.6	0.0	0.0	0.0	0.0	0.0		8800	8600		■				
OH12 2	17-101 – HUFF RUN	9.90	WWH	0.0	0.0	0.0	0.5	9.4	9.9		9002	8112		■				
OH12 16	17-106 – MCGUIRE CREEK	11.80	WWH	0.5	0.0	0.0	0.0	11.3	0.0		8800	8600		■				
OH12 5	17-110 – INDIAN FORK	18.90	WWH	0.5	0.0	0.0	0.0	18.4	0.0		8800	8600		■				

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH24 1													■					
OH20 22												■	■	●				
OH20 1												●	■	▲	▲			
OH24 27												■						
OH24 36											■	■						
OH24 40											■	■						
OH24 61														■				
OH12 1																		
OH12 13	■											■						
OH12 19																		
OH12 2										■								
OH12 16																		
OH12 5																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH24 1	■																																		▲	
OH20 22	■	▲																																	●	
OH20 1	■	▲																																	▲	
OH24 27																																				■
OH24 36																																				■
OH24 40																																				■
OH24 61																		▲																		■
OH12 1																																				
OH12 13		■																																		
OH12 19																																				
OH12 2															■																					
OH12 16																																				
OH12 5																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH12 10	17-115 – COLD SPRING RUN	3.40	WWH	3.4	0.0	0.0	0.0	0.0	0.0		8800	7900		■				
OH12 12	17-117 – GANT CREEK	4.60	WWH	0.5	0.0	0.0	0.0	4.1	0.0		8800	7900		■				
OH12 23	17-120 – IRISH CREEK	7.60	WWH	0.3	0.0	7.3	0.0	0.0	7.3	Y	8800	8400			■			
OH12 27	17-123 – JEFFERSON CREEK	4.60	WWH	0.0	0.0	0.0	4.6	0.0	4.6	Y	8800	8200				■		
OH12 26	17-124 – UNNAMED TRIBUTARY @ JEWETT	5.00	WWH	0.0	0.0	0.0	0.5	4.5	0.5	Y	8800	8100	■					
OH19 1	17-150 – KILLBUCK CREEK (DOUGHTY CR. TO WALHONDING R.)	15.70	WWH	0.0	0.0	11.2	4.5	0.0	15.7	Y	8800	8300	■					
OH19 8	17-150 – KILLBUCK CREEK (BLACK CREEK TO DOUGHTY CREEK)	9.50	WWH	0.0	0.0	1.1	8.4	0.0	9.5	Y	8800	8300	■					
OH19 14	17-150 – KILLBUCK CREEK (SAPPS RUN TO BLACK RUN)	6.10	WWH	0.9	0.0	5.2	0.0	0.0	5.2	Y	8800	8300	■					
OH19 23	17-150 – KILLBUCK CREEK (SALT CREEK TO SAPPS RUN)	6.30	WWH	4.3	0.0	0.0	2.0	0.0	2.0		8800	8500	■					
OH19 31	17-150 – KILLBUCK CREEK (APPLE CREEK TO SALT CREEK)	12.20	WWH	0.0	0.0	2.6	9.6	0.0	12.2	Y	8800	8500	■					
OH19 38	17-150 – KILLBUCK CREEK (SHADE CREEK TO APPLE CREEK)	10.80	LWH	10.2	0.0	0.0	0.6	0.0	0.6		8800	8500	■					
OH19 4	17-153 – DOUGHTY CREEK	20.10	WWH	20.1	0.0	0.0	0.0	0.0	0.0		8800	8300	■					
OH19 9	17-157 – BIG RUN	6.40	WWH	0.5	0.0	0.0	0.0	5.9	0.0		8800	7900		■				

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH12 10																		
OH12 12																		
OH12 23						■												
OH12 27						■												
OH12 26												■						
OH19 1												■						
OH19 8												■						
OH19 14												■						
OH19 23												■						
OH19 31						■						■						
OH19 38						■						■						
OH19 4																		
OH19 9																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH12 10																																				
OH12 12																																				
OH12 23																																				■
OH12 27																																				■
OH12 26	■																																			
OH19 1	■																																			
OH19 8	■																																			
OH19 14	■																																			
OH19 23	■																																			
OH19 31	■																																			
OH19 38	■																																			
OH19 4																																				
OH19 9																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH19 12	17-160 – WOLF CREEK	9.00	WWH	0.5	0.0	0.0	0.0	8.5	0.0		8800	7900		■				
OH19 15	17-162 – SHRIMPLIN RUN	5.40	WWH	0.5	0.0	0.0	0.0	4.9	0.0		8800	7900		■				
OH19 16	17-163 – HARDY RUN	1.70	WWH	0.5	0.0	0.0	0.0	1.2	0.0		8800	7900		■				
OH19 26	17-172 – MARTINS CREEK	8.30	WWH	0.5	0.0	0.0	0.0	7.8	0.0		8800	7900		■				
OH19 27	17-173 – PAINT CREEK	9.00	WWH	0.5	0.0	0.0	0.0	8.5	0.0		8800	7900		■				
OH19 29	17-175 – SALT CREEK	11.60	WWH	0.5	0.0	0.0	0.0	11.1	0.0		8800	7900		■				
OH19 35	17-180 – SHREVE CREEK	7.50	WWH	0.0	0.0	0.0	3.8	3.7	3.8		8800	8500	■					
OH19 36	17-181 – APPLE CREEK	11.70	WWH	1.5	0.0	2.2	5.0	3.0	7.2		8800	8300	■					
OH19 37	17-182 – LITTLE APPLE CREEK	8.60	WWH	5.3	0.0	3.1	0.2	0.0	3.3		8800	8700		■				
OH19 40	17-184 – LITTLE KILLBUCK CREEK	9.00	WWH	9.0	0.0	0.0	0.0	0.0	0.0		8800	8300	■					
OH19 47	17-190 – CAMEL CREEK	7.60	WWH	5.1	0.0	0.0	2.5	0.0	2.5		8905	8809		■				
OH19 38.1	17-192 – CHRISTMAS RUN	3.50	WWH	0.0	0.0	0.0	0.5	3.0	0.5		8800	8500		■				
OH19 31.1	17-193 – UNNAMED TRIBUTARY @RM 41.49	2.00	WWH	0.0	0.0	0.0	0.5	1.5	0.5		8800	8500	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH19 12																		
OH19 15																		
OH19 16																		
OH19 26																		
OH19 27																		
OH19 29																		
OH19 35												■		●				
OH19 36					■							■						
OH19 37												■						
OH19 40																		
OH19 47												■			▲			
OH19 38.1												■						
OH19 31.1												■						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH19 12																																				
OH19 15																																				
OH19 16																																				
OH19 26																																				
OH19 27																																				
OH19 29																																				
OH19 35	●	■																																	●	
OH19 36		■												●																						
OH19 37		■					●															■														
OH19 40																																				
OH19 47		■																							▲											
OH19 38.1														■																						
OH19 31.1																																			■	

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH19 31.2	17-194 – UNNAMED TRIBUTARY @RM 44.58	5.30	WWH	0.5	0.0	0.0	0.0	4.8	0.0		8800	8500	■					
OH19 31.4	17-195 – TRIB. TO KILLBUCK CREEK (RM 46.0)	1.00	WWH	0.0	0.0	0.0	0.5	0.5	0.5		8800	8500	■					
OH19 31.3	17-196 – JENNINGS DITCH	4.00	WWH	0.5	0.0	0.0	0.0	3.5	0.0		8800	8500			■			
OH19 31.5	17-197 – TRIB. TO KILLBUCK CREEK (RM 47.1)	0.50	WWH	0.0	0.0	0.0	0.5	0.0	0.5		8800	8500	■					
OH19 36.1	17-198 – SPRING RUN	3.00	WWH	0.0	0.0	0.0	0.5	2.5	0.5		8800	8500			■			
OH19 44.1	17-199 – KILLBUCK DITCH	2.00	LRW	0.5	0.0	0.0	0.0	1.5	0.0		8800	8600			■			
OH22 5	17-200 – LICKING RIVER (ROCKY FORK TO DILLON RES.)	15.50	WWH	0.0	0.0	2.3	13.2	0.0	15.5		8800	8100	■					
OH22 16	17-200 – LICKING RIVER (NORTH FORK TO ROCKY FORK)	8.50	WWH	1.7	0.0	6.8	0.0	0.0	6.8	Y	8800	8500	■					
OH22 1	17-200 – LICKING RIVER (DILLON RES. TO MUSKINGUM RIVER	6.20	WWH	3.6	0.0	0.0	0.0	2.6	0.0		9002	8909	■					
OH22 9	17-207 – BRUSHY FORK	6.30	WWH	6.3	0.0	0.0	0.0	0.0	0.0		8800	8200			■			
OH22 10	17-210 – ROCKY FORK	20.20	EWH	20.2	0.0	0.0	0.0	0.0	0.0	Y	8800	8600	■					
OH22 11	17-211 – LOST RUN	10.20	WWH	10.2	0.0	0.0	0.0	0.0	0.0	Y	8800	8600	■					
OH22 14	17-214 – PAINTER RUN	5.70	WWH	5.7	0.0	0.0	0.0	0.0	0.0	Y	8800	8600	■					

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH19 31.2													■																																											
OH19 31.4																																																								
OH19 31.3																																																								
OH19 31.5																																																								
OH19 36.1																																																								
OH19 44.1																																																								
OH22 5		▲			●								■							●	■																																			
OH22 16			■																		■																																				
OH22 1																																																								
OH22 9																																																								
OH22 10																																																								
OH22 11																																																								
OH22 14																																																								

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH22 15	17-215 – LONG RUN	5.30	WWH	5.3	0.0	0.0	0.0	0.0	0.0	Y	8800	8600	■					
OH22 45	17-220 – S. FK. LICKING R. (BUCKEYE LK OUT TO LICKING)	12.80	WWH	0.0	0.0	8.9	3.9	0.0	12.8	Y	8800	8400	■					
OH22 61	17-220 – S. FK. LICKING R. (HEADWATERS TO TRIB. @ 23.2	9.70	WWH	4.8	0.6	4.3	0.0	0.0	4.3	Y	8800	8400	■					
OH22 59	17-220 – S. FK. LICKING R(TRIB@ 23.25 TO WASTEWEIR RN)	10.40	WWH	0.0	7.1	3.3	0.0	0.0	3.3		9002	8810	■					
OH22 46	17-221 – RACCOON CREEK	27.50	WWH	0.0	18.5	0.0	9.0	0.0	9.0		8800	8700	■					
OH22 48	17-223 – LOBDELL CREEK	12.10	WWH	0.0	0.0	0.5	0.0	11.6	0.5		9002	8908		■				
OH22 49	17-224 – MOOTS RUN	3.60	WWH	3.6	0.0	0.0	0.0	0.0	0.0		8800	7900			■			
OH22 50	17-225 – SIMPSON RUN	1.50	WWH	1.5	0.0	0.0	0.0	0.0	0.0		8800	7900			■			
OH22 51	17-226 – PET RUN	3.60	WWH	3.6	0.0	0.0	0.0	0.0	0.0		8800	7900			■			
OH22 52	17-227 – KIBER RUN	2.10	WWH	2.1	0.0	0.0	0.0	0.0	0.0		8800	8700	■					
OH22 57	17-232 – RAMP CREEK	8.40	WWH	0.5	0.0	0.0	0.0	7.9	0.0		8800	8400			■			
OH22 58	17-233 – BEAVER RUN	4.80	WWH	0.0	0.0	0.0	0.5	4.3	0.5		8800	8300			■			
OH22 60	17-234 – BELL RUN	5.90	WWH	0.5	0.0	0.0	0.0	5.4	0.0		8800	7900			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH22 15																		
OH22 45												■						
OH22 61												■						
OH22 59												■			●			
OH22 46												■						
OH22 48												■			■			
OH22 49																		
OH22 50																		
OH22 51																		
OH22 52																		
OH22 57					■													
OH22 58					■													
OH22 60																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewers	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH22 15																																				
OH22 45		■																																		
OH22 61		■																																		
OH22 59		■																							●											
OH22 46		■																																		
OH22 48																									■											
OH22 49																																				
OH22 50																																				
OH22 51																																				
OH22 52																																				
OH22 57	■													▲																						
OH22 58	■																																			
OH22 60																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH22 59.1	17-237 – WASTEWEIR RUN	2.00	WWH	0.0	0.0	0.0	2.0	0.0	2.0	Y	8800	8400	■					
OH22 46.1	17-240 – TRIB. TO RACCOON CREEK (RM 18.9)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		9002	8908	■					
OH22 23	17-250 – NORTH FORK (SYCAMORE CR. TO S. FK. LICKING R)	20.30	WWH	6.5	0.0	12.8	1.0	0.0	13.8	Y	8800	8400	■					
OH22 37	17-250 – NORTH FORK LICKING R (HEADWATERS TO SYCAMORE)	18.10	WWH	17.7	0.0	0.0	0.4	0.0	0.4		8800	8700	■					
OH22 24	17-251 – LOG POND RUN	7.00	WWH	0.0	0.0	0.0	0.0	7.0	0.0		8800	7900		■				
OH22 25	17-252 – DRY RUN	7.30	WWH	7.3	0.0	0.0	0.0	0.0	0.0		8800	7900		■				
OH22 30	17-257 – CLEAR FORK	9.40	WWH	0.0	9.4	0.0	0.0	0.0	0.0		8800	7900		■				
OH22 32	17-259 – DOG HOLLOW RUN	2.00	WWH	2.0	0.0	0.0	0.0	0.0	0.0		8800	7900		■				
OH22 33	17-260 – LAKE FORK	12.20	WWH	0.0	12.2	0.0	0.0	0.0	0.0		8800	8400			■			
OH22 41	17-267 – OTTER FORK	16.40	WWH	0.0	0.5	0.0	0.0	15.9	0.0		9002	8908	■					
OH22 23.1	17-277 – HOG HOLLOW RUN	2.00	WWH	0.0	0.0	0.0	0.0	2.0	0.0		8800	7900		■				
OH22 23.3	17-278 – CEDAR RUN	5.00	WWH	0.0	0.0	0.0	0.0	5.0	0.0		8800	7900		■				
OH22 23.2	17-279 – TRIB. TO N. FK. LICKING RIVER (RM 5.0)	1.00	WWH	0.0	0.0	0.0	0.0	1.0	0.0		8800	7900		■				

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH22 59.1												■		●	●					■																							●			●									
OH22 46.1																																																							
OH22 23												■							●	■																																			
OH22 37														■																																									■
OH22 24																																																							
OH22 25																																																							
OH22 30															■																				■																				
OH22 32																																																							
OH22 33																																																							
OH22 41																																																							
OH22 23.1																																																							
OH22 23.3																																																							
OH22 23.2																																																							

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH23 36	17-300 – MOXAHALA CREEK (HEADWATERS TO JONATHAN CREEK)	25.70	LRW	0.0	0.0	0.0	25.7	0.0	0.5		9002	8812		■			
OH23 39	17-304 – ELK RUN	3.60	WWH	0.0	0.0	0.0	3.6	0.0	3.6		8800	7900		■			
OH23 43	17-308 – BLACK FORK	7.70	WWH	0.0	1.3	0.0	6.4	0.0	6.4		8800	8700	■				
OH23 22	17-310 – JONATHAN CREEK (BUCKEYE FORK TO MOXAHALA CREE	4.90	LWH	0.0	0.0	0.0	4.9	0.0	4.9		8800	7900		■			
OH23 27	17-310 – JONATHAN CREEK (HEADWATERS TO BUCKEYE FORK)	41.20	EWH	0.0	0.0	11.3	1.0	28.9	12.3		8800	8600	■				
OH23 25	17-313 – KENT RUN	12.10	WWH	0.0	12.1	0.0	0.0	0.0	0.0		8800	8600	■				
OH23 28	17-315 – BUCKEYE FORK	9.90	LRW	0.0	0.0	0.0	9.9	0.0	0.0		9002	8612		■			
OH23 45	17-323 – MCLUNEY CREEK	5.60	LRW	0.0	0.0	0.0	0.5	5.1	0.0		9002	8112		■			
OH23 43.1	17-325 – OGG CREEK	3.00	WWH	0.0	0.4	0.0	0.3	2.3	0.3		8800	8700	■				
OH23 36.1	17-326 – UNNAMED TRIBUTARY @RM 24.79	5.30	LRW	0.0	0.0	0.0	2.0	3.3	0.0		8800	7900		■			
OH14 28	17-350 – STILLWATER CREEK (BOGGS FORK TO BRUSHY FORK)	2.50	LWH	0.5	0.0	0.0	0.0	2.0	0.0		8800	8600		■			
OH14 1	17-350 – STILLWATER CREEK (BRUSHY CR. TO TUSCARAWAS R)	25.80	WWH	0.3	0.0	1.0	3.2	21.3	4.2		9002	8810	■				
OH14 2	17-360 – L. STILLWATER CREEK	33.70	WWH	0.0	0.0	0.0	0.5	33.2	0.5		8800	8600		■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modifcation	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH23 36										■								
OH23 39										■	●							
OH23 43										■	●							
OH23 22										■	●							
OH23 27											■							
OH23 25																		
OH23 28										■								
OH23 45										■								
OH23 43.1										■	●							
OH23 36.1										■								
OH14 28																		
OH14 1												■		■				
OH14 2												■						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH23 36															■																					
OH23 39															■																					
OH23 43															■																					
OH23 22							▲								■			▲				▲														
OH23 27															■																					
OH23 25																																				
OH23 28															■																					
OH23 45															■																					
OH23 43.1															■											●										
OH23 36.1															■																					
OH14 28																																				
OH14 1		■																						■												
OH14 2																																				■

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Biosurvey-A	Intensive Biosurvey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH14 20	17-380 – BRUSHY FORK	24.00	WWH	0.5	0.0	0.0	0.0	23.5	0.0		8800	8600			■			
OH13 14	17-400 – SUGAR CREEK (MIDDLE FORK TO SOUTH FORK)	7.10	WWH	0.0	0.0	0.0	0.5	6.6	0.5	Y	8800	8700			■			
OH13 20	17-400 – SUGAR CREEK (HEADWATERS TO M. FK. SUGAR CR.)	25.60	WWH	0.0	0.0	0.5	0.0	25.1	0.5		8800	8300				■		
OH13 1	17-400 – SUGAR CREEK (S. FK. SUGAR CR TO TUSCARAWAS R)	12.30	WWH	0.0	0.5	0.0	0.7	11.1	0.7		9002	8810		■				
OH13 16	17-405 – ELM RUN	5.40	WWH	0.0	0.0	0.0	0.5	4.9	0.5		8800	8700		■				
OH13 17	17-406 – MIDDLE FORK SUGAR CREEK	23.00	WWH	2.3	0.0	0.0	0.0	20.7	0.0		8800	8700		■				
OH13 22	17-418 – LITTLE SUGAR CREEK	10.60	WWH	0.0	0.0	0.5	0.0	10.1	0.5		8800	8300				■		
OH11 1	17-450 – SANDY CREEK (NIMISHILLEN CR. TO TUSCARAWAS R)	8.00	WWH	0.0	0.0	0.0	8.0	0.0	8.0		8800	8600	■					
OH11 12	17-450 – SANDY CREEK (L. SANDY CR. TO NIMISHILLEN CR.)	9.40	WWH	0.0	1.1	0.0	1.1	7.2	1.1	Y	8800	8600	■					
OH11 13	17-454 – INDIAN RUN	7.00	WWH	0.5	0.0	0.0	0.0	6.5	0.0		8800	8500			■			
OH11 5	17-460 – NIMISHILLEN CREEK (W. BRANCH TO SANDY CREEK)	14.70	LWH	0.0	0.0	0.0	14.7	0.0	14.7	Y	8800	8600	■					
OH11 7	17-461 – SHERRICK RUN	5.00	WWH	0.0	0.0	0.0	5.0	0.0	5.0	Y	8800	8500	■					
OH11 10	17-462 – MIDDLE BRANCH NIMISHILLEN CREEK	16.60	WWH	0.0	0.0	12.8	3.8	0.0	16.6		8800	8500	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH14 20																		
OH13 14					●													
OH13 20												■						
OH13 1	■		▲		●													
OH13 16						■												
OH13 17																		
OH13 22												■						
OH11 1					■						●							
OH11 12											■							
OH11 13																		
OH11 5			●		■	■						■						
OH11 7					■							■						
OH11 10					●						■	■			▲			

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH14 20																																				
OH13 14		■																																		
OH13 20								■																												
OH13 1																							▲													■
OH13 16																																				■
OH13 17																																				
OH13 22								■																												
OH11 1	■														▲																	●				
OH11 12															■																					
OH11 13																																				
OH11 5	■	▲																														■	■			
OH11 7	■	■																																		
OH11 10						■								●										▲									●			

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH11 11	17-463 – EAST BRANCH NIMISHILLEN CREEK	10.40	LWH	4.1	0.0	0.0	6.3	0.0	6.3	Y	8800	8500	■					
OH11 8	17-464 – WEST BRANCH NIMISHILLEN CREEK	9.00	WWH	0.0	0.0	0.0	5.9	3.1	5.9		8800	8700	■					
OH11 6	17-468 – HURFORD RUN	5.00	LWH	0.0	0.0	0.0	3.1	1.9	1.7	Y	8800	8700	■					
OH11 21	17-470 – STILL FORK SANDY CREEK	16.10	WWH	0.0	0.0	0.5	0.5	15.1	1.0		8800	8400			■			
OH11 6.1	17-477 – DOMER DITCH	2.00	WWH	0.0	0.0	0.5	0.1	1.4	0.6		8800	8500	■					
OH11 7.2	17-478 – OSNABURG DITCH	1.50	WWH	0.0	0.0	0.0	0.7	0.8	0.7		8800	8500	■					
OH11 8.1	17-479 – MCDOWELL DITCH	5.00	WWH	0.0	0.0	0.0	5.0	0.0	5.0		8800	8500	■					
OH11 8.2	17-480 – HOOVER DITCH	0.50	WWH	0.0	0.0	0.0	0.5	0.0	0.5		8800	8500	■					
OH11 8.3	17-481 – ZIMBER DITCH	4.00	WWH	3.5	0.0	0.0	0.5	0.0	0.5	Y	8800	8500	■					
OH11 10.2	17-482 – HARTVILLE DITCH	4.00	WWH	0.7	0.0	0.1	2.7	0.5	2.8	Y	8800	8500	■					
OH11 11.3	17-483 – TRIB. TO EAST BRANCH NIMISHILLEN CREEK	3.00	WWH	0.0	0.0	0.0	1.3	1.7	1.3		8800	8500	■					
OH11 10.1	17-484 – SWARTZ DITCH	5.00	WWH	2.6	0.0	0.0	0.0	2.4	0.0		8800	8500	■					
OH11 7.1	17-485 – UNNAMED TRIBUTARY @RM 4.6	2.00	WWH	0.0	0.0	0.0	0.5	1.5	0.5		8800	8500			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH11 11					■	●						■		▲				
OH11 8					■						■	■						
OH11 6			■		■	■						●	●		■			
OH11 21																		
OH11 6.1	■																	
OH11 7.2						■				●	●	■			■			
OH11 8.1					●						●	●			■			
OH11 8.2					●							●			■			
OH11 8.3					●							■						
OH11 10.2					■						●				●			
OH11 11.3															●	■		
OH11 10.1											●				■			
OH11 7.1										●	●			■				

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Talings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH11 11	■	■																																		▲
OH11 8	■													■																						
OH11 6	■																							■				●	●			■	■			
OH11 21																																				
OH11 6.1	■																																			
OH11 7.2	■	■													●									■												
OH11 8.1	●													●										■												
OH11 8.2	●													■										■												
OH11 8.3	●													■																						
OH11 10.2	■						●																	●												
OH11 11.3	■																							●												
OH11 10.1							●																	■				■								
OH11 7.1															●																					■

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH10 1	17-500 – TUSCARAWAS R. (PIGEON RUN TO SANDY CREEK)	13.60	WWH	0.0	0.0	0.0	13.6	0.0	13.6	Y	8800	8300	■					
OH10 5	17-500 – TUSCARAWAS R. (NEWMAN CREEK TO PIGEON RUN)	5.20	WWH	0.0	0.0	0.0	5.2	0.0	5.2	Y	8800	8300	■					
OH10 9	17-500 – TUSCARAWAS R. (CHIPPEWA CREEK TO NEWMAN CR.)	11.30	WWH	0.0	0.0	0.0	11.3	0.0	11.3	Y	8800	8300	■					
OH10 26	17-500 – TUSCARAWAS RIVER (WOLF CREEK TO CHIPPEWA CR.)	7.50	WWH	0.0	0.0	0.0	7.5	0.0	7.5	Y	8800	8300	■					
OH10 33	17-500 – TUSCARAWAS RIVER (HEADWATERS TO WOLF CREEK)	19.30	WWH	3.6	0.0	8.1	7.6	0.0	15.7	Y	8800	8300	■					
OH15 32	17-500 – TUSCARAWAS RIVER (SUGAR CREEK TO NEWMAN CR.)	7.60	WWH	0.0	0.0	0.0	7.6	0.0	7.6	Y	8800	8300	■					
OH15 31	17-500 – TUSCARAWAS RIVER (CONOTTON CREEK TO SUGAR CR)	7.40	WWH	0.0	0.8	2.9	3.7	0.0	3.5		9002	8810	■					
OH15 24	17-500 – TUSCARAWAS RIVER (SUGAR CR. TO STILLWATER CR)	11.10	WWH	0.0	1.0	10.0	0.1	0.0	10.1		9002	8810	■					
OH15 10	17-500 – TUSCARAWAS RIVER (DUNLOP CREEK TO EVANS CR.)	10.50	WWH	10.5	0.0	0.0	0.0	0.0	0.0		9002	8810	■					
OH15 1	17-500 – TUSCARAWAS RIVER (EVANS CR. TO WALHONDING R.)	14.80	WWH	6.9	0.0	6.8	1.1	0.0	6.9		9002	8810	■					
OH15 19	17-500 – TUSCARAWAS RIVER (STILLWATER CR TO DUNLOP CR)	21.70	WWH	0.0	21.2	0.5	0.0	0.0	0.5		9002	8810	■					
OH15 3	17-502 – WHITE EYES CREEK	10.00	WWH	0.0	0.0	0.5	0.0	9.5	0.5		8800	8300	■					
OH15 6	17-505 – EVANS CREEK	9.30	WWH	0.0	0.0	0.0	1.3	8.0	1.3		8800	8300	■					

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH10 1			●			●						■							●	■																															●				
OH10 5			●			■					▲	■			●				■	●																							▲								●				
OH10 9			■		●	■						■			●				■	■												●								●				●							●				
OH10 26		●	●			■						●	●	●	●				■	■												●								●			●			●					●				
OH10 33			●		●							■			●				●													■											●								●				
OH15 32			●		●						●	■			●				■	●																																			
OH15 31			●		■	■				●	●	■	▲		●				■	■													●								▲				●								▲		
OH15 24			▲		▲	■				▲	▲	■							●	■													▲																				▲		
OH15 10												●						▲		■																																			
OH15 1					▲							■			▲			▲	■																																			▲		▲
OH15 19												●			■					●																																		■		
OH15 3										■					●																		■									▲								●				
OH15 6										●					■																		■									●												

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH15 18	17-516 – BROWNING RUN	3.40	WWH	0.5	0.0	0.0	0.0	2.9	0.0		8800	7900			■			
OH15 26	17-522 – PONE RUN	3.60	WWH	0.0	0.0	0.5	0.0	3.1	0.5		8800	7900			■			
OH15 27	17-523 – BEAVERDAM CREEK (HEADWATERS TO TUSCARAWAS R.)	11.00	WWH	0.5	0.0	0.0	0.0	10.5	0.0		8800	8300			■			
OH15 28	17-524 – OLDTOWN CREEK	11.20	WWH	0.0	0.0	0.0	0.5	10.7	0.5		9002	8712			■			
OH15 30	17-526 – CROOKED CREEK	4.80	WWH	0.0	0.0	0.0	0.5	4.3	0.5		9002	8112			■			
OH10 2	17-530 – WOLF CREEK	4.50	WWH	0.5	0.0	0.0	0.0	4.0	0.0		8800	8300			■			
OH10 7	17-534 – NEWMAN CREEK	14.30	WWH	0.0	0.0	0.0	0.5	13.8	0.5		8800	8300			■			
OH10 11	17-537 – FOX RUN	7.10	WWH	0.0	0.0	0.0	0.5	6.6	0.5	Y	8800	8300			■			
OH10 27	17-539 – PANCAKE CREEK	4.80	WWH	0.5	0.0	0.0	0.0	4.3	0.0		8800	8200			■			
OH10 28	17-540 – WOLF CREEK	13.10	WWH	5.2	0.0	0.0	4.6	3.3	4.6	Y	8800	8300	■					
OH10 30	17-542 – VAN HYNING RUN	4.60	WWH	0.0	0.0	0.0	0.5	4.1	0.5	Y	8800	8300	■					
OH10 31	17-543 – PIGEON CREEK	8.60	WWH	0.0	0.0	0.0	8.6	0.0	8.6	Y	8800	8300	■					
OH10 32	17-544 – SHOCALOG RUN	5.60	WWH	0.5	0.0	0.0	0.0	5.1	0.0	Y	8800	7900			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH15 18																		
OH15 26					■													
OH15 27																		
OH15 28										■								
OH15 30										■								
OH10 2																		
OH10 7			■															
OH10 11			●									■						
OH10 27																		
OH10 28	■		●		▲							●	●		●			
OH10 30			●								●	■		▲	●			
OH10 31	●		■								●	●			●	●		
OH10 32																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH15 18																																				
OH15 26																																				■
OH15 27																																				
OH15 28															■																					
OH15 30															■																					
OH10 2																																				
OH10 7	■																																			
OH10 11	●	■																																		
OH10 27																																				
OH10 28	■	●												●							●				●								●			
OH10 30		■												●											●											▲
OH10 31	■	●												●											●			▲				●				
OH10 32																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

09/05/90

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH10 33.2	17-545 – MYERSVILLE TRIBUTARY	3.00	WWH	0.0	0.0	0.0	0.5	2.5	0.5		8800	8300	■					
OH10 33.3	17-546 – MUD RUN	4.00	WWH	0.5	0.0	0.0	0.0	3.5	0.0		8800	8300			■			
OH10 33.4	17-547 – TRIB. TO TUSCARAWAS RIVER (UNIONTOWN)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7800			■			
OH10 26.1	17-549 – TRIB. TO TUSCARAWAS RIVER (RM 108.9)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8300			■			
OH10 13	17-550 – CHIPPEWA CREEK (STEELE DITCH TO TUSCARAWAS R)	12.80	MWH	0.0	0.0	0.1	12.7	0.0	12.8	Y	8800	8300	■					
OH10 21	17-550 – CHIPPEWA CREEK (HEADWATERS TO STEELE DITCH)	13.90	MWH	0.0	0.0	0.0	13.9	0.0	13.9	Y	8800	8300	■					
OH10 14	17-551 – RED RUN	6.00	WWH	0.0	0.0	0.0	6.0	0.0	6.0	Y	8800	8300	■					
OH10 16	17-553 – RIVER STYX	18.00	MWH	0.0	0.0	17.5	0.5	0.0	18.0	Y	8800	8300	■					
OH10 17	17-554 – HOLMES BROOK	4.60	WWH	0.0	0.0	0.0	4.6	0.0	4.6		8800	8300	■					
OH10 19	17-556 – LITTLE CHIPPEWA CREEK	11.50	WWH	0.0	0.0	0.0	11.5	0.0	11.5	Y	8800	8600	■					
OH10 20	17-561 – UNNAMED TRIB. TO LITTLE CHIPPEWA CREEK	2.00	WWH	0.0	0.0	0.0	2.0	0.0	2.0		8800	8600	■					
OH10 13.1	17-562 – SILVER CREEK	5.00	WWH	0.0	0.0	0.0	5.0	0.0	5.0	Y	8800	8300			■			
OH10 13.5	17-563 – TRIB. TO SILVER CREEK (MEADOWS SUBDIV.)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8300			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH10 33.2												■			●			
OH10 33.3																		
OH10 33.4																		
OH10 26.1																		
OH10 13											●	■						
OH10 21											■	●						
OH10 14												●			●			
OH10 16					▲							■						
OH10 17											■							
OH10 19					●							■			●			
OH10 20														■				
OH10 13.1												■						
OH10 13.5																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH10 33.2		■																						●												
OH10 33.3																																				
OH10 33.4																																				
OH10 26.1																																				
OH10 13	■	■																						●				▲								
OH10 21		■																						■				●								
OH10 14		■																						●												
OH10 16	■	■						▲																												
OH10 17						■																														
OH10 19		■																						●												
OH10 20																																				■
OH10 13.1		■																																		
OH10 13.5																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH10 1.2	17-564 – TRIB. TO TUSCARAWAS RIVER (RM 82.0)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8600			■			
OH10 21.1	17-565 – TRIB. TO CHIPPEWA CREEK (RM 14.5)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8300			■			
OH10 13.3	17-566 – STEELE DITCH	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8300			■			
OH10 5.2	17-567 – TRIB. TO TUSCARAWAS RIVER (RM 89.9)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8300			■			
OH10 1.1	17-568 – SHERMAN RUN	3.00	WWH	0.5	0.0	0.0	0.0	2.5	0.0		8800	8300			■			
OH15 23.1	17-569 – TRIB. TO MUD RUN	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7900			■			
OH10 19.1	17-570 – TRIB. TO LITTLE CHIPPEWA CREEK (RM 10.5)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8100			■			
OH10 13.4	17-571 – TRIB. TO SILVER CREEK (RM 4.1)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8100			■			
OH10 5.1	17-575 – WEST SIPPO CREEK	5.00	WWH	0.5	0.0	0.0	0.0	4.5	0.0		8800	8300			■			
OH20 24	17-600 – WALHONDING RIVER (KILLBUCK CR. TO TUSCARAWAS)	7.30	WWH	7.3	0.0	0.0	0.0	0.0	0.0		9002	8810	■					
OH20 31	17-600 – WALHONDING R. (MOHICAN/KOKOSING TO KILLBUCK)	23.20	WWH	23.2	0.0	0.0	0.0	0.0	0.0		9002	8810	■					
OH20 28	17-613 – LITTLE MILL CREEK	5.40	WWH	0.0	0.0	0.0	0.5	4.9	0.5		9002	8312			■			
OH18 1	17-650 – KOKOSING RIVER (JELLOWAY CREEK TO MOHICAN R.)	11.40	EWH	8.2	0.0	3.2	0.0	0.0	3.2		8800	8700	■					

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Talings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH10 1.2																																																							
OH10 21.1																																																							
OH10 13.3																																																							
OH10 5.2																																																							
OH10 1.1																																																							
OH15 23.1																																																							
OH10 19.1																																																							
OH10 13.4																																																							
OH10 5.1																																																							
OH20 24																																																							
OH20 31																																																							
OH20 28								●	■																								■		●																				
OH18 1							■																																																■

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Biosurvey-A	Intensive Biosurvey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH18 12	17-650 – KOKOSING RIVER (WOLF RUN TO JELLOWAY CREEK)	10.00	EWH	4.8	0.0	5.2	0.0	0.0	5.2		8800	8700	■					
OH18 22	17-650 – KOKOSING RIVER (N BR KOKOSING R TO WOLF RUN)	8.30	EWH	5.7	0.0	2.6	0.0	0.0	2.6		8800	8700	■					
OH18 34	17-650 – KOKOSING RIVER (HEADWATERS TO N BR KOKOSING)	27.50	EWH	16.0	0.0	4.1	0.0	7.4	20.1		8800	8700	■					
OH18 5	17-654 – JELLOWAY CREEK	13.30	EWH	0.0	0.0	3.0	1.4	8.9	4.4		8800	8700	■					
OH18 6	17-655 – LITTLE JELLOWAY CREEK	10.50	EWH	2.5	0.0	0.0	0.0	8.0	0.0		8800	8700	■					
OH18 7	17-656 – EAST BRANCH JELLOWAY CREEK	4.60	EWH	0.0	0.0	4.0	0.6	0.0	4.6		8800	8500		■				
OH18 14	17-662 – SCHENCK CREEK	12.10	EWH	0.0	0.0	2.8	0.0	9.3	2.8		8800	8700	■					
OH18 27	17-674 – NORTH BRANCH KOKOSING RIVER	18.30	WWH	0.0	0.0	6.2	5.6	6.5	11.8		8800	8700	■					
OH17 4	17-700 – MOHICAN RIVER (ROCKY FORK TO UNNAMED TRIB.)	11.50	WWH	11.5	0.0	0.0	0.0	0.0	0.0	Y	8800	8700				■		
OH17 10	17-714 – MUDDY FORK MOHICAN RIVER	28.90	WWH	5.7	0.0	0.0	0.0	23.2	0.0		8800	8400				■		
OH17 14	17-718 – JEROME FORK MOHICAN R. (LANG CR. TO LAKE FK)	12.30	WWH	0.0	0.0	0.0	12.3	0.0	12.3	Y	8800	8400	■					
OH17 24	17-718 – JEROME FORK	2.50	WWH	0.0	0.0	0.7	0.9	0.9	1.6	Y	8800	8400	■					
OH17 16	17-720 – OLDTOWN RUN	7.30	WWH	0.5	0.0	0.0	0.0	6.8	0.0		8800	8400			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH18 12												■						
OH18 22												■						
OH18 34												■			▲			
OH18 5												■			▲			
OH18 6																		
OH18 7												■						
OH18 14		●										■						
OH18 27												■			●			
OH17 4																		
OH17 10																		
OH17 14					■		●					■						
OH17 24							■											
OH17 16																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH18 12		■																																		
OH18 22		■																																		
OH18 34							●	■														▲						▲								
OH18 5								■																				▲●								
OH18 6																																				
OH18 7		■						●																												
OH18 14								■																								●				
OH18 27		●					●	■																												
OH17 4																																				
OH17 10																																				
OH17 14	■	■																																		
OH17 24																																				■
OH17 16																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH17 18	17-722 – SCOTT RUN	3.40	WWH	0.5	0.0	0.0	0.0	2.9	0.0		8800	8400			■			
OH17 19	17-723 – NEWELL RUN	7.20	WWH	0.5	0.0	0.0	0.0	6.7	0.0		8800	8400			■			
OH17 20	17-724 – KAKOTAWA CREEK	5.90	WWH	0.5	0.0	0.0	0.0	5.4	0.0		8800	8400			■			
OH17 21	17-725 – LANG CREEK	21.60	WWH	2.4	0.0	0.0	0.8	18.4	0.8		8800	8400	■					
OH17 22	17-726 – JAMISON CREEK	5.40	WWH	0.5	0.0	0.0	0.7	4.2	0.7	Y	8800	8400	■					
OH17 23	17-727 – TOWN RUN	5.60	WWH	0.0	0.0	0.0	0.5	5.1	0.5	Y	8800	8400	■					
OH16 21	17-730 – BLACK FK. MOHICAN R. (WHETSTONE CR TO ROCKY)	17.00	WWH	0.0	0.0	0.0	0.5	16.5	0.5		8800	7900		■				
OH16 23	17-730 – BLACK FK MOHICAN R(LEATHERWOOD CR TO WHETSTON	13.90	WWH	0.0	0.0	0.0	8.3	5.6	8.3		8800	8400	■					
OH16 28	17-730 – BLACK FK MOHICAN R.(HEADWATERS TO LEATHERWOOD	11.60	WWH	0.0	0.0	3.2	8.4	0.0	11.6	Y	8800	8400	■					
OH16 16	17-730 – BLACK FORK MOHICAN R. (ROCKY FK TO CLEAR FK)	14.00	WWH	1.0	0.0	0.0	13.0	0.0	13.0		8905	8809		■				
OH16 19	17-733 – ROCKY FORK MOHICAN RIVER	19.60	WWH	1.4	0.0	0.0	15.0	3.2	15.0	Y	8800	7900	■					
OH16 20	17-734 – TOUBY RUN	5.30	WWH	0.0	0.0	0.0	2.3	3.0	2.3		8800	7900			■			
OH16 29	17-740 – LEATHERWOOD CREEK	3.50	WWH	0.5	0.0	0.0	0.0	3.0	0.0		8800	8400			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH17 18																		
OH17 19																		
OH17 20																		
OH17 21					■	●						■						
OH17 22					▲							■						
OH17 23					▲							■						
OH16 21						■												
OH16 23												■						
OH16 28					●	●						■						
OH16 16					■							●			▲			
OH16 19					■	●						▲			▲			
OH16 20					■													
OH16 29																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH17 18																																				
OH17 19																																				
OH17 20																																				
OH17 21	■	■																																		
OH17 22														■																						
OH17 23	●													■																						
OH16 21																																				■
OH16 23		■																																		
OH16 28	●	■						▲						▲																			▲			
OH16 16	■	▲	●																																	
OH16 19	■	■												●										▲												
OH16 20	■													▲																						
OH16 29																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH16 31	17-742 – MARSH RUN	7.10	WWH	0.5	0.0	0.0	0.0	6.6	0.0		8800	8400			■			
OH17 22.1	17-743 – TRIB. TO JAMISON CREEK	1.20	WWH	0.0	0.0	0.0	1.2	0.0	1.2		8800	8400	■					
OH16 19.5	17-744 – TRIB. TO ROCKY FORK (RM 11.4)	3.00	WWH	0.5	0.0	0.0	0.0	2.5	0.0		8800	8000			■			
OH16 19.3	17-745 – TRIB. TO ROCKY FORK (RM 7.7)	3.00	WWH	0.5	0.0	0.0	0.0	2.5	0.0		8800	7900			■			
OH16 19.8	17-746 – TRIB. TO ROCKY FORK (RM 16.4)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7900			■			
OH16 28.4	17-747 – TRIB. TO BLACK FORK (RM 57.1)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7900			■			
OH16 28.3	17-748 – TRIB. TO BLACK FORK (RM 54.4)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7900			■			
OH16 19.1	17-749 – UNNAMED TRIBUTARY @RM 3.7	2.00	WWH	0.0	0.0	0.5	0.0	1.5	0.5		8800	8000			■			
OH16 14	17-762 – STEEL RUN	2.60	WWH	0.5	0.0	0.0	0.0	2.1	0.0		8800	8000			■			
OH16 28.5	17-763 – TRIB. TO BLACK FORK (RM 58.8)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7900			■			
OH16 28.2	17-764 – TRIB. TO BLACK FORK (RM 45.9)	2.60	WWH	0.5	0.0	0.0	0.0	2.1	0.0		8800	8400			■			
OH16 19.7	17-765 – TRIB. TO ROCKY FORK (RM 14.4)	2.60	WWH	0.5	0.0	0.0	0.0	2.1	0.0		8800	8000			■			
OH16 19.6	17-766 – TRIB. TO ROCKY FORK (RM 12.0)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8000			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH16 31																		
OH17 22.1					■	●												
OH16 19.5																		
OH16 19.3																		
OH16 19.8																		
OH16 28.4																		
OH16 28.3																		
OH16 19.1						■												
OH16 14																		
OH16 28.5																		
OH16 28.2																		
OH16 19.7																		
OH16 19.6																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH16 31																																				
OH17 22.1	■													▲																						
OH16 19.5																																				
OH16 19.3																																				
OH16 19.8																																				
OH16 28.4																																				
OH16 28.3																																				
OH16 19.1																																			■	
OH16 14																																				
OH16 28.5																																				
OH16 28.2																																				
OH16 19.7																																				
OH16 19.6																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Biosurvey-A	Intensive Biosurvey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH16 19.4	17-767 – TRIB. TO ROCKY FORK (RM 10.7)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8000			■			
OH16 19.2	17-768 – TRIB. TO ROCKY FORK (RM 7.1)	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8000			■			
OH21 6	17-800 – WILLS CREEK (BIRDS CAMP TO WHITE EYES CREEK)	16.30	WWH	0.0	0.0	0.0	16.3	0.0	16.3		8800	8400	■					
OH21 14	17-800 – WILLS CREEK (SALT FORK TO BIRDS RUN)	18.80	WWH	0.0	0.0	0.0	18.8	0.0	18.8		8800	8400	■					
OH21 29	17-800 – WILLS CREEK (LEATHERWOOD CREEK TO SALT FORK)	14.80	WWH	0.0	0.0	0.0	14.8	0.0	14.8	Y	8800	8400	■					
OH21 43	17-800 – WILLS CREEK (BUFFALO FORK TO LEATHERWOOD CR.)	16.50	WWH	0.0	0.0	0.0	16.5	0.0	16.5	Y	8800	8400	■					
OH21 1	17-800 – WILLS CREEK (WHITE EYES CREEK TO MUSKINGUM R)	15.10	WWH	7.1	0.0	0.0	8.0	0.0	8.0		9002	8810			■			
OH21 31	17-830 – CROOKED CREEK	16.50	WWH	0.0	0.0	0.0	16.5	0.0	16.5	Y	8800	8400	■					
OH21 33	17-832 – PETERS CREEK	5.90	LWH	5.9	0.0	0.0	0.0	0.0	0.0		8800	7800			■			
OH21 35	17-834 – NORTH CROOKED CREEK	6.00	LWH	6.0	0.0	0.0	0.0	0.0	0.0		8800	7800			■			
OH21 1.1	17-838 – TRIB. TO WHITE EYES CREEK (RM 2.6)	2.00	LWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7900			■			
OH21 1.2	17-839 – TRIB. TO WHITE EYES CREEK (RM 4.5)	2.00	LWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	7900			■			
OH21 38	17-840 – LEATHERWOOD CREEK	28.60	WWH	3.1	0.0	7.0	13.0	5.5	20.0	Y	8800	8400	■					

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH16 19.4																																																								
OH16 19.2																																																								
OH21 6												■																					■																							
OH21 14												■																					■																							
OH21 29												■	●							●													■																							
OH21 43												■	●							●													■																							
OH21 1												●			■																		●	▲											■											
OH21 31												■																					■																							
OH21 33																																																								
OH21 35																																																								
OH21 1.1																																																								
OH21 1.2																																																								
OH21 38												■																					■																							

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH21 39	17-841 – MUD RUN	3.50	WWH	0.0	0.0	0.0	2.5	1.0	2.5		8800	8400	■					
OH21 40	17-842 – HAWKINS RUN	3.90	WWH	0.0	0.0	0.0	3.9	0.0	3.9		8800	8400	■					
OH21 41	17-843 – INFIRMARY RUN	4.90	WWH	0.0	0.0	0.0	4.9	0.0	4.9		8800	8400	■					
OH21 38.2	17-845 – TRIB. TO LEATHERWOOD CREEK (RM 21.7)	2.00	WWH	0.0	0.0	0.0	0.0	2.0	0.0		8800	8400					■	
OH21 38.1	17-846 – TRIB. TO LEATHERWOOD CREEK (RM 20.6)	2.00	WWH	0.0	0.0	0.0	0.0	2.0	0.0		8800	8400		■				
OH21 46	17-850 – SENECA FORK	30.30	WWH	0.0	0.0	0.0	30.3	0.0	30.3		8800	8600	■					
OH21 61	17-870 – BUFFALO FORK	7.90	LWH	7.9	0.0	0.0	0.0	0.0	0.0		8800	8700	■					
OH21 62	17-871 – CRANE RUN	2.40	WWH	2.4	0.0	0.0	0.0	0.0	0.0		8800	8700	■					
OH21 63	17-872 – YOKER CREEK	7.50	WWH	1.0	0.0	2.0	1.9	2.6	3.9		8800	8700	■					
OH21 69	17-878 – COLLINS FORK	5.30	WWH	0.0	0.0	0.0	5.3	0.0	0.0		8800	8700	■					
OH21 70	17-879 – MILLER CREEK	4.50	LWH	4.5	0.0	0.0	0.0	0.0	0.0		8800	8700	■					
OH21 72	17-881 – RANNELLS CREEK	3.10	WWH	3.1	0.0	0.0	0.0	0.0	0.0		8800	8700	■					
OH21 73	17-890 – BUFFALO CREEK	14.50	LWH	14.5	0.0	0.0	0.0	0.0	0.0		8800	8400	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH21 39															■			
OH21 40											■							
OH21 41											■				●			
OH21 38.2																		
OH21 38.1																		
OH21 46											●	●		■				
OH21 61											■							
OH21 62											●							
OH21 63											■							
OH21 69											▲							
OH21 70											■							
OH21 72											■							
OH21 73																		

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH21 39																										■										
OH21 40															■																					
OH21 41															■										●											
OH21 38.2																																				
OH21 38.1																																				
OH21 46															●							●				●	■									
OH21 61															■			●																		
OH21 62															●			■																		
OH21 63															■																					
OH21 69															■			●																		
OH21 70															■			●																		
OH21 72															■			●																		
OH21 73																																				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Biosurvey-A	Intensive Biosurvey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH21 6.1	17-894 – TRIB. TO BUFFALO FORK	2.00	LRW	0.0	0.0	0.0	2.0	0.0	0.0		8800	8700	■					
OH23 16	17-914 – BRUSH CREEK	11.60	WWH	0.0	0.0	0.0	0.5	11.1	0.5		9002	8212			■			
OH23 1	17-940 – SALT CREEK	27.10	WWH	0.5	0.0	0.0	0.0	26.6	0.0		8800	8600			■			
OH23 11	17-950 – LITTLE SALT CREEK	7.50	WWH	0.5	0.0	0.0	0.0	7.0	0.0		8800	8600			■			
OH20 2	17-960 – WAKATOMIKA CREEK (BRUSHY FORK TO MUSKINGUM R)	19.70	WWH	0.0	19.7	0.0	0.0	0.0	0.0		8800	8400				■		
OH20 4	17-962 – MILL FORK	11.00	LRW	0.0	0.0	0.0	0.0	11.0	0.0		8800	7900					■	
OH20 4.1	17-981 – TRIB. TO MILL FORK (RM 6.6)	2.00	WWH	0.0	0.0	0.0	0.0	2.0	0.0		8800	7900			■			
OH23 11.1	17-982 – TRIB. TO LITTLE SALT CREEK (RM 3.6)	2.00	WWH	0.0	0.0	0.0	0.0	2.0	0.0		8800	8600			■			
OH 1 30	18-001 – MAHONING RIVER (HEADWATERS TO BEECH CREEK)	28.00	WWH	10.2	0.0	0.0	0.0	17.8	0.0		8800	8400				■		
OH 2 1	18-001 – MAHONING RIVER (PA. TO YELLOW CREEK)	4.00	WWH	0.0	0.0	0.0	4.0	0.0	4.0		8800	8300	■					
OH 2 7	18-001 – MAHONING RIVER (YELLOW CREEK TO MILL CREEK)	6.20	WWH	0.0	0.0	0.0	6.2	0.0	6.2		8800	8300	■					
OH 2 20	18-001 – MAHONING RIVER (MILL CREEK TO MEANDER CREEK)	8.50	WWH	0.0	0.0	0.0	8.5	0.0	8.5		8800	8000	■					
OH 2 35	18-001 – MAHONING RIVER (MEANDER CREEK TO DUCK CREEK)	15.30	WWH	0.0	0.0	0.0	15.3	0.0	15.3	Y	8800	8300	■					

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulatbn	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH21 6.1													■			●																																								
OH23 16										■																							■																							
OH23 1																																																								
OH23 11																																																								
OH20 2																																																								
OH20 4																																																								
OH20 4.1																																																								
OH23 11.1																																																								
OH 1 30																																																								
OH 2 1					■	■		■				■							■	■												●																			●				
OH 2 7			■		■	■		■											■	■												●																			■				
OH 2 20					■	●		●				■								■																															■				
OH 2 35			●		■	■		■				■				●			■	■												●																								

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH 2 3	18-005 – HINES RUN	2.70	WWH	0.5	0.0	0.0	0.0	2.2	0.0		8800	7900			■			
OH 2 5	18-007 – YELLOW CREEK	11.10	WWH	0.5	0.0	0.0	0.0	10.6	0.0		8800	8300			■			
OH 2 10	18-011 – CRAB CREEK	7.80	WWH	0.5	0.0	0.0	0.0	7.3	0.0		8800	8300			■			
OH 2 22	18-014 – SQUAW CREEK	6.70	WWH	0.5	0.0	0.0	0.0	6.2	0.0		8800	8300			■			
OH 2 23	18-015 – MEANDER CREEK	20.40	WWH	0.0	0.0	0.0	2.0	18.4	2.0		8800	8000	■					
OH 2 12	18-020 – MILL CREEK	20.90	WWH	0.0	0.0	10.1	10.8	0.0	20.9	Y	8800	8200	■					
OH 2 13	18-021 – BEARS DEN RUN	4.10	WWH	0.0	0.0	0.0	4.1	0.0	4.1		8800	8200	■					
OH 2 14	18-022 – AX FACTORY RUN	4.00	WWH	0.0	0.0	0.0	1.5	2.5	1.5		8800	8200	■					
OH 2 15	18-023 – ANDERSONS RUN	4.50	WWH	0.0	0.0	0.0	1.5	3.0	1.5		8800	8200	■					
OH 2 16	18-024 – CRANBERRY RUN	1.60	WWH	0.0	0.0	0.0	0.5	1.1	0.5		8800	8200			■			
OH 2 17	18-025 – INDIAN RUN	4.80	WWH	0.0	0.0	0.0	1.2	3.6	1.2		8800	8200	■					
OH 2 18	18-026 – SAW MILL RUN	2.40	WWH	0.0	0.0	0.0	1.0	1.4	1.0		8800	8200			■			
OH 2 37	18-028 – RED RUN	4.70	LRW	0.0	0.0	0.0	4.7	0.0	0.0		8800	8200			■			

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Siviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulatbn	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH 2 3																																																								
OH 2 5																																																								
OH 2 10																																																								
OH 2 22																																																								
OH 2 23					●	■					■	■							■	■																																			
OH 2 12					■	■					●	■								■											●	▲																							
OH 2 13	■				■							●		●					■													■								●														●	
OH 2 14												■		■																		■												■											
OH 2 15												■		●						■																								●											
OH 2 16												■																				■																							
OH 2 17					■																										▲	■																							
OH 2 18												■								■																																			
OH 2 37					■	■													■													■																							

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Biosurvey-A	Intensive Biosurvey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH 2 38	18-029 – DUCK CREEK	12.80	WWH	0.5	0.0	0.0	0.0	12.3	0.0	Y	8800	8300			■			
OH 2 27	18-030 – MOSQUITO CREEK	11.80	WWH	0.0	0.0	0.0	11.8	0.0	11.8	Y	8800	8300	■					
OH 2 31	18-030 – MOSQUITO CREEK	23.20	WWH	0.0	0.0	1.0	0.0	22.2	1.0		8800	8300	■					
OH 1 3	18-040 – EAGLE CREEK	10.90	WWH	0.0	0.0	0.0	0.8	10.1	0.8		8800	8000	■					
OH 1 8	18-040 – EAGLE CREEK	14.10	WWH	9.7	0.0	1.1	3.3	0.0	4.4		8800	8100	■					
OH 1 6	18-043 – SOUTH FORK EAGLE CREEK	9.00	WWH	3.1	0.0	1.0	0.0	4.9	1.0		8800	8700		■				
OH 1 10	18-046 – SILVER CREEK	7.20	CWH	0.0	7.2	0.0	0.0	0.0	0.0		8800	8100	■					
OH 1 21	18-048 – KALE CREEK	13.00	WWH	0.5	0.0	0.0	0.0	12.5	0.0		8800	7800			■			
OH 1 33	18-063 – FISH CREEK	4.20	WWH	0.0	0.0	0.1	4.1	0.0	4.2		8800	8700		■				
OH 1 11	18-065 – HIRAM TRIB.	1.70	WWH	0.0	0.0	0.0	1.3	0.4	1.3		8800	8100	■					
OH 1 30.1	18-066 – NAYLOR DITCH (SEBRING)	1.00	LRW	0.0	0.0	0.0	1.0	0.0	0.0		8800	8200			■			
OH 2 37.1	18-067 – TRIB. TO RED RUN (WARREN)	2.00	LRW	0.0	0.0	0.0	0.5	1.5	0.5		8800	8200			■			
OH 3 1	18-504 – LITTLE YANKEE RUN	13.20	WWH	5.3	0.0	0.0	7.9	0.0	7.9	Y	8800	8400	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modifcation	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH 2 38																		
OH 2 27					●	■					▲	■		●				
OH 2 31														■				
OH 1 3															■			
OH 1 8						■	■					■						
OH 1 6											●				■			
OH 1 10																		
OH 1 21																		
OH 1 33						■						■						
OH 1 11						■						■						
OH 1 30.1					■													
OH 2 37.1					■													
OH 3 1					●							■						

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH 2 38																																				
OH 2 27	▲	■																									●								▲	
OH 2 31																											■									
OH 1 3																										■										
OH 1 8		■																																		
OH 1 6																										■										
OH 1 10																																				
OH 1 21																																				
OH 1 33		■																																		
OH 1 11		■																																		
OH 1 30.1	■													■																						
OH 2 37.1														■																						
OH 3 1	●	■												●								▲														

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH 3 2	18-505 – LITTLE DEER CREEK	5.10	WWH	0.5	0.0	0.0	0.5	4.1	0.5		8800	8400	■					
OH 3 3	18-506 – YANKEE RUN	14.80	WWH	0.0	0.0	0.0	0.5	14.3	0.5	Y	8800	8400	■					
OH 3 3.1	18-528 – MUD RUN	2.00	WWH	0.0	0.0	0.0	2.0	0.0	2.0	Y	8800	8400	■					
OH 3 10	18-550 – PYMATUNING CREEK (HEADWATERS TO SHENANGO RES)	23.10	WWH	0.0	0.0	0.5	0.5	22.1	1.0		8800	8400				■		
OH89 1	19-001 – CUYAHOGA RIVER (SHIP CHANNEL (5.5) TO LAKE ER	5.50	WWH	0.0	0.0	0.0	5.5	0.0	5.5	Y	8800	8700	■					
OH89 32	19-001 – CUYAHOGA RIVER (BIG CREEK TO SHIP CHANNEL (5.	1.70	WWH	0.0	0.0	0.0	1.7	0.0	1.7		8800	8700						
OH89 11	19-001 – CUYAHOGA RIVER (BRANDYWINE CR. TO TINKERS CR)	7.80	WWH	0.0	0.0	0.0	7.8	0.0	7.8		9002	8809	■					
OH89 14	19-001 – CUYAHOGA RIVER (YELLOW CREEK TO BRANDYWINE CR	13.00	WWH	0.0	0.0	0.0	13.0	0.0	13.0		9002	8809	■					
OH89 27	19-001 – CUYAHOGA RIVER (L. CUYAHOGA R. TO YELLOW CR.)	5.10	WWH	0.0	0.0	0.0	5.1	0.0	5.1		9002	8809	■					
OH88 5	19-001 – CUYAHOGA RIVER (CONGRESS LK OUT TO L. CUY. R)	14.50	WWH	0.0	0.0	0.8	10.3	3.4	11.1		9002	8809	■					
OH88 11	19-001 – CUYAHOGA RIVER (BLACK BR. TO CONGESS LK OUT)	19.80	WWH	0.5	0.0	0.0	0.5	18.8	0.5		9002	8809	■					
OH89 6	19-001 – CUYAHOGA RIVER (TINKERS CREEK TO BIG CREEK)	9.20	WWH	0.0	0.0	0.0	9.2	0.0	9.2		9002	8809	■					
OH89 2	19-002 – KINGSBURY RUN	9.50	WWH	0.0	0.0	0.0	0.5	9.0	0.5		8800	8400			■			

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH 3 2						■												
OH 3 3					▲							■						
OH 3 3.1												■						
OH 3 10														■				
OH89 1			●	■		■		■				■			■			
OH89 32			●	■		■		■				■						
OH89 11	■											●						
OH89 14	●											■						
OH89 27	●											■						
OH88 5			●									■	▲	●	●			
OH88 11												■		●				
OH89 6	●			●		■	●											
OH89 2			■	■														

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH 3 2																																				■
OH 3 3	▲	■																				▲														
OH 3 3.1														■																						
OH 3 10																																	■			
OH89 1	■	●												■											■								■			
OH89 32	■	●												■														▲					■			
OH89 11		■																																		
OH89 14		■																																		
OH89 27				●										■																						
OH88 5	▲	●												■											■	●							●			
OH88 11		●												▲												●										
OH89 6	●	■																															■			
OH89 2														▲																	■	■				

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Biosurvey-A	Intensive Biosurvey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH89 5	19-005 – BIG CREEK	12.00	LWH	0.0	0.0	0.0	8.4	3.6	8.4	Y	8800	8400	■					
OH89 7	19-006 – MILL CREEK	12.20	LWH	0.0	0.0	0.0	5.6	6.6	0.0	Y	8800	8400	■					
OH89 8	19-007 – TINKERS CREEK (POND BROOK TO CUYAHOGA RIVER)	22.50	WWH	0.0	0.0	0.0	22.5	0.0	22.5	Y	8800	8400	■					
OH89 9	19-007 – TINKERS CREEK (HEADWATERS TO POND BROOK)	7.50	WWH	0.0	0.0	2.8	4.7	0.0	7.5	Y	8800	8400	■					
OH89 10	19-008 – POND BROOK	4.80	WWH	0.0	0.0	0.0	4.8	0.0	4.8	Y	8800	8400	■					
OH89 12	19-009 – CHIPPEWA CREEK	8.20	WWH	0.0	0.0	0.0	0.5	7.7	0.5		8800	8400	■					
OH89 13	19-010 – BRANDYWINE CREEK	11.50	WWH	0.0	0.0	0.0	8.0	3.5	8.0		8800	8400	■					
OH89 24	19-020 – FURNACE RUN	10.40	WWH	0.5	0.0	0.1	0.0	9.8	0.1		8800	8400	■					
OH89 25	19-021 – YELLOW CREEK	10.30	WWH	0.0	4.6	0.0	0.0	5.7	0.0		9002	8809		■				
OH89 29	19-024 – MUD BROOK	11.00	WWH	0.0	0.0	0.0	11.0	0.0	11.0		8800	8400	■					
OH89 30	19-025 – POWERS BROOK	4.90	WWH	0.0	0.0	0.0	1.3	3.6	1.3		8800	8400	■					
OH88 8	19-028 – BREAKNECK CREEK	20.00	WWH	2.0	0.0	17.3	0.7	0.0	18.0		8800	8700	■					
OH88 10	19-029 – POTTER CREEK	9.20	WWH	0.5	0.0	0.0	0.5	8.2	0.5		8800	8400	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH89 5					●							■				▲		
OH89 7												■						
OH89 8					■							■						
OH89 9												■						
OH89 10						●						■		●	●			
OH89 12						■												
OH89 13												■						
OH89 24						■												
OH89 25																		
OH89 29					▲	▲						■		●	●			
OH89 30						●						■						
OH88 8												■		▲				
OH88 10												■		▲				

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulatbn	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH89 5	●													■																						
OH89 7	▲													■							▲															
OH89 8	▲	■												▲																						
OH89 9		■												▲																						
OH89 10		■												▲											●										●	
OH89 12								▲						▲																						
OH89 13		■																																		
OH89 24																																				■
OH89 25																																				
OH89 29	▲	●																							●											■
OH89 30		■																																		
OH88 8		●																			▲													■		
OH88 10																																		■		

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH88 1	19-030 – L. CUYAHOGA R. (WINGFOOT LAKE OUT. TO CUYAHOG	11.00	WWH	0.0	0.0	0.8	10.2	0.0	11.0	Y	8800	8600	■					
OH88 4	19-030 – L. CUYAHOGA R. (HEADWATERS TO WINGFOOT LAKE O	7.00	WWH	0.0	0.0	0.5	1.2	5.3	1.7		8800	8600	■					
OH88 2	19-031 – SPRINGFIELD LAKE OUTLET	3.70	WWH	0.0	0.0	0.0	3.7	0.0	3.7		8800	8600	■					
OH88 3	19-032 – WINGFOOT LAKE OUTLET	3.20	WWH	0.0	0.0	0.0	3.2	0.0	3.2		8800	8600		■				
OH90 16	19-041 – EUCLID CREEK	9.50	WWH	0.0	0.0	0.0	9.5	0.0	9.5		9002	8906		■				
OH88 9	19-042 – WAHOO DITCH	5.00	WWH	0.0	0.0	0.0	5.0	0.0	5.0		8800	8400	■					
OH89 8.1	19-043 – WOOD CREEK	2.50	LRW	2.5	0.0	0.0	0.0	0.0	0.0		8800	8400	■					
OH88 8.1	19-044 – BRIMFIELD DITCH	3.00	WWH	0.0	0.0	0.0	0.5	2.5	0.5		8800	8400	■					
OH89 5.1	19-045 – FORD BRANCH BIG CREEK	5.00	WWH	0.0	0.0	0.0	5.0	0.0	5.0	Y	8800	8400	■					
OH89 8.3	19-046 – BEAVER MEADOW CREEK	3.00	WWH	0.0	0.0	0.0	1.2	1.8	1.2		8800	8400	■					
OH89 9.1	19-047 – STREETSBORO TRIB. TO TINKERS CREEK	2.00	WWH	0.0	0.0	0.0	0.5	1.5	0.5		8800	8400	■					
OH89 8.2	19-048 – DEER LICK RUN	3.00	LRW	0.0	0.0	0.0	3.0	0.0	0.0	Y	8800	8400	■					
OH88 1.2	19-049 – OHIO CANAL	10.00	WWH	0.0	0.0	0.0	4.3	5.7	10.0		8800	8600	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH88 1	■				■							■						
OH88 4					▲							■			■			
OH88 2						■						■		■		■		
OH88 3	■																	
OH90 16					●	●						■			■			
OH88 9												■						
OH89 8.1												●		■				
OH88 8.1						■												
OH89 5.1												■						
OH89 8.3					●							■						
OH89 9.1												■						
OH89 8.2					■	●						●						
OH88 1.2					▲							■			●			

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH88 1	■													■																			■			
OH88 4	▲																									■									■	
OH88 2	■																															■				■
OH88 3	■																															■				
OH90 16		●		■																		▲		■								●				
OH88 9		■																				▲														
OH89 8.1		●																																	■	
OH88 8.1																																				■
OH89 5.1	■													■																						
OH89 8.3		●																																		
OH89 9.1		■																																		
OH89 8.2	■																																			
OH88 1.2	●													■										●												

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH88 4.1	19-050 – UNION OIL TRIB.	3.00	WWH	0.0	0.0	1.6	0.0	1.4	1.6		8800	8600	■					
OH88 1.1	19-051 – CAMP CREEK	3.00	WWH	0.0	0.0	0.0	1.6	1.4	1.6		8800	8600	■					
OH89 10.1	19-054 – TRIB. TO POND BROOK	2.00	WWH	0.5	0.0	0.0	0.0	1.5	0.0		8800	8400			■			
OH89 13.1	19-055 – INDIAN CREEK	5.00	WWH	0.5	0.0	0.0	0.0	4.5	0.0		8800	8400			■			
OH90 16.1	19-056 – TRIB. TO EUCLID CREEK	5.00	WWH	0.0	0.0	5.0	0.0	0.0	5.0		9002	8906		■				
OH86 2	20-001 – BLACK RIVER	16.00	WWH	0.0	0.0	0.0	16.0	0.0	16.0	Y	8800	8200	■					
OH86 3	20-002 – FRENCH CREEK	15.80	WWH	0.0	0.0	0.4	15.4	0.0	15.8	Y	8800	8200	■					
OH85 3	20-003 – BEAVER CREEK	12.20	WWH	0.0	0.0	0.0	1.4	10.8	1.4		8800	8200			■			
OH86 4	20-010 – EAST BRANCH (HILL SPAULDING DITCH TO W BR BLA	12.00	WWH	5.5	0.0	0.0	1.7	4.8	1.7	Y	8800	8200	■					
OH86 10	20-014 – EAST FORK EAST BRANCH BLACK RIVER	9.30	WWH	5.1	0.0	0.0	0.8	3.4	0.8		8800	8700		■				
OH86 13	20-020 – WEST BRANCH BLACK R. (ELK CR. TO E. BR. BLACK	14.60	WWH	0.0	0.0	0.0	4.3	10.3	4.3	Y	8800	8200	■					
OH86 17	20-020 – WEST BRANCH BLACK R. (CHARLEMONT CR. TO ELK C	25.40	WWH	0.0	0.0	0.0	1.8	23.6	1.8		8800	8700		■				
OH86 14	20-021 – PLUM CREEK	8.00	WWH	0.0	0.0	0.0	8.0	0.0	8.0		8800	8700		■				

WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Talings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH88 4.1															■																												●												
OH88 1.1	■																		▲													■																								
OH89 10.1																																																							
OH89 13.1																																																							
OH90 16.1												■								■		■																		●															
OH86 2			■	●		■						■				●			■	■												●																					■		
OH86 3												■								■																				▲															
OH85 3						■						●								■				▲																															
OH86 4				▲								■				▲																■								●															
OH86 10												■								■																				▲															
OH86 13				▲							▲	■			●				▲	▲				▲								■													●										
OH86 17											■	●								●				■																															
OH86 14							■				●	■		▲						■												▲								●															▲

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH86 18	20-024 – CHARLEMONT CREEK	11.50	WWH	0.0	0.0	0.0	3.3	8.2	3.3		8800	8700		■				
OH87 24.1	20-026 – NO NAME CREEK	5.00	WWH	0.5	0.0	0.0	0.0	4.5	0.0		8800	7800			■			
OH85 7	21-001 – VERMILION RIVER (EAST FORK TO LAKE ERIE)	15.90	EWH	13.9	0.0	0.0	0.0	2.0	0.0	Y	8800	8400				■		
OH85 12	21-001 – VERMILION RIVER (SOUTHWEST BRANCH TO EAST BRA	18.10	WWH	0.0	14.9	3.2	0.0	0.0	3.2		8800	8700	■					
OH85 15	21-001 – VERMILION RIVER (HEADWATERS TO SOUTHWEST BRAN	17.30	WWH	1.5	0.0	8.0	7.8	0.0	15.8		8800	8700	■					
OH85 10	21-003 – EAST BRANCH VERMILION RIVER	15.60	WWH	1.0	0.0	0.0	0.0	14.6	0.0	Y	8800	8100		■				
OH85 14	21-005 – SOUTHWEST BRANCH	10.40	WWH	3.4	0.0	6.5	0.5	0.0	7.0		8800	8700	■					
OH85 16	21-006 – BUCK CREEK	8.30	WWH	0.0	0.0	1.1	7.2	0.0	8.3		8800	8700	■					
OH85 17	21-007 – CLEAR CREEK	5.20	WWH	2.2	0.0	3.0	0.0	0.0	3.0		8800	8700	■					
OH85 11	21-008 – SKELLINGER CREEK	5.00	WWH	0.0	0.0	0.0	5.0	0.0	5.0	Y	8800	8100		■				
OH85 10.1	21-009 – TRIB. TO E. BR. VERMILION R. (RM 8.2)	3.00	WWH	0.0	0.0	0.0	0.0	3.0	0.0	Y	8800	8100		■				
OH63 1	22-001 – WABASH RIVER (BEAVER CREEK TO OHIO/INDIANA LI	2.70	WWH	0.0	0.0	0.0	2.7	0.0	2.7	Y	8800	8400	■					
OH63 16	22-001 – WABASH RIVER (STONY CREEK TO BEAVER CREEK)	12.60	WWH	0.0	0.0	8.2	4.4	0.0	12.6		8800	8500	■					

Causes

WBID	Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown
OH86 18											■	●						
OH87 24.1																		
OH85 7																		
OH85 12											■							
OH85 15											●	▲			■			
OH85 10																		
OH85 14											■	▲						
OH85 16						■												
OH85 17											■							
OH85 11												■						
OH85 10.1																		
OH63 1											●	▲			■			
OH63 16											●	▲			■			

Sources

WBID	Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH86 18		●				■																▲														
OH87 24.1																																				
OH85 7																																				
OH85 12						■																														
OH85 15						●								▲										■												
OH85 10																																				
OH85 14	▲					●		■																												
OH85 16																																			■	
OH85 17						■																														
OH85 11	■																																			
OH85 10.1																																				
OH63 1	▲					●																▲		■												
OH63 16	▲					●																		■												

Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

[Assessment summary of streams and rivers monitored for Ohio's Water Resource Inventory ("305(b) Report")]

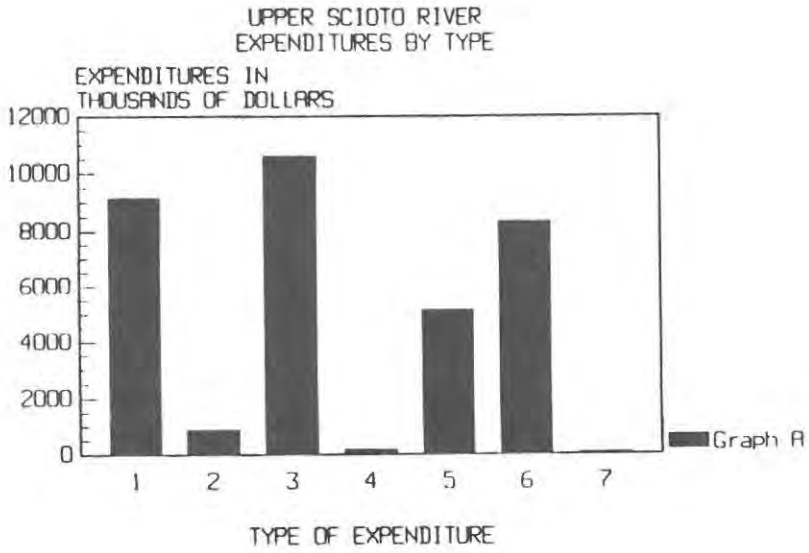
Waterbody ID	River Code/Segment Description	Segment Length	Aquatic Life Use	Aquatic Life Use Attainment: Full	Threat.	Part.	None	Not Assess.	Not Fish.	Impaired Recreation Use	Year/ Month Assessed	Year/ Month Sampled	Intensive Bio survey-A	Intensive Bio survey-B	Intensive Chemistry	Biosurvey Fixed Station	Chemical Fixed Station	Survey/Source Data
OH63 19	22-001 – WABASH RIVER (HEADWATERS TO STONY CREEK)	13.00	WWH	4.4	0.0	2.8	2.4	3.4	5.2		8800	8500	■					
OH63 19.1	22-012 – TRIB. TO WABASH RIVER	1.00	LRW	0.0	0.0	0.0	1.0	0.0	0.0		8800	8500			■			
OH63 4	22-100 – BEAVER CREEK (GRAND LAKE ST. MARYS TO WABASH	10.60	WWH	0.0	0.0	0.0	10.4	0.2	10.4	Y	8800	8400	■					
OH63 10	22-106 – HARDIN CREEK	5.70	WWH	0.5	0.0	0.0	0.0	5.2	0.0		8800	8400	■					
OH62 23	23-001 – MILL CREEK (WEST FORK MILL CREEK TO OHIO RIVE	11.60	LWH	0.0	0.0	0.0	11.6	0.0	11.6	Y	8800	8100			■			
OH62 27	23-001 – MILL CREEK (SHARON CREEK TO WEST FORK MILL CR	4.10	LWH	0.0	0.0	0.0	4.1	0.0	4.1		8905	8809	■					
OH62 30	23-001 – MILL CREEK (HEADWATERS TO SHARON CREEK)	29.40	LWH	0.0	0.0	0.0	2.1	27.3	2.1		8905	8809	■					
OH62 26	23-004 – WEST FORK MILL CREEK (UPSTREAM)	15.20	LWH	0.0	0.0	0.0	15.2	0.0	15.2		8905	8809	■					
OH62 28	23-005 – SHARON CREEK	5.00	WWH	0.0	0.0	0.0	5.0	0.0	5.0		8905	8809	■					
OH62 31	23-006 – EAST FORK MILL CREEK	7.10	WWH	0.0	7.1	0.0	0.0	0.0	0.0		8905	8809	■					
OH62 30.1	23-010 – GLENDALE TRIB.	2.00	WWH	0.0	0.0	0.0	2.0	0.0	2.0		8800	8300			■			

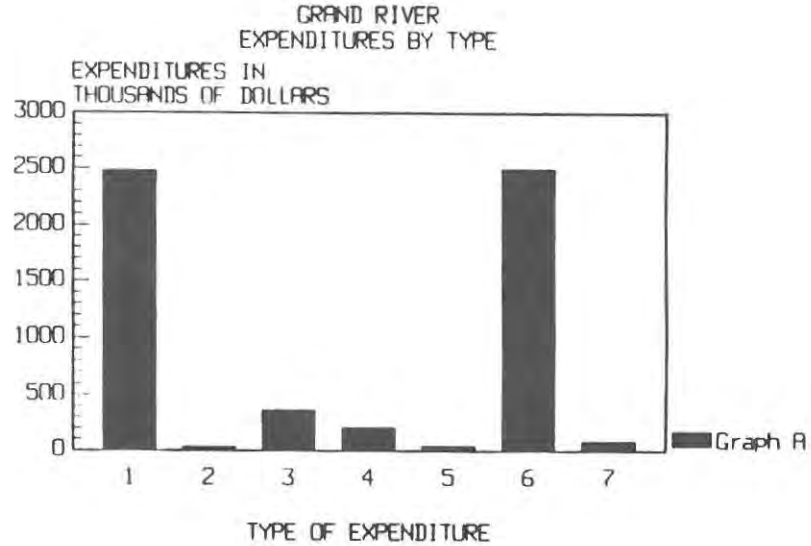
WBID	Causes: Unknown Toxicity	Pesticides	Priority Organics	Nonpriority Organics	Metals	Ammonia	Chlorine	Other Inorganics	Nutrients	pH	Siltation	Organic Enrich./D.O.	Thermal Modification	Flow Alteration	Habitat Alteration	Oil & Grease	Nitrite	Unknown	Sources: Industrial	Municipal	Municipal Pre-treatment	Combined Sewer Overflow	Storm Sewerss	Crop Production	Truck Farms, Orchards	Pasture Lands	Feedlots	Aquaculture	Animal Holding Areas	Silviculture	Construction	Urban Runoff/Surface Runoff	Surface Mining	Subsurface Mining	Dredge Mining	Petroleum Activities	Mill/Mine Tailings	Sludge Disposal	Landfills	Septic Tanks	Hazardous Waste	Channelization	Dredging	Dam Construction	Flow Regulation	Riparian Removal	Streambank Modification	Intermittent (Modified)	Waste Storage	Spills	In-Place Contaminants	Natural	Intermittent (Natural)	Unknown
OH63 19					▲							●	▲		■				●	▲				●																		■									●				
OH63 19.1					■								■						■							●																									■			
OH63 4						●							■		●					■						▲																●												
OH63 10																																																						
OH62 23	■												■		■	■			■	■												■															●							
OH62 27															●			■	■			●																																
OH62 30													■							■		●																																
OH62 26															●			■	■			●																																
OH62 28																		■																																				■
OH62 31																																																							
OH62 30.1						●							■							■																																			

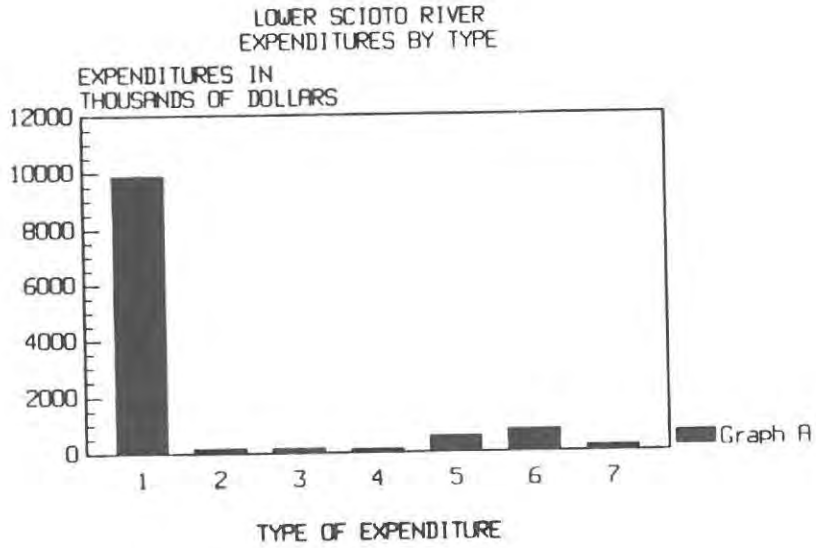
Key: ■ – High Magnitude; ● – Moderate Magnitude; ▲ – Slight Magnitude

Section B

Capital Expenditures by River Basin
and
Type of Pollution Control Activity







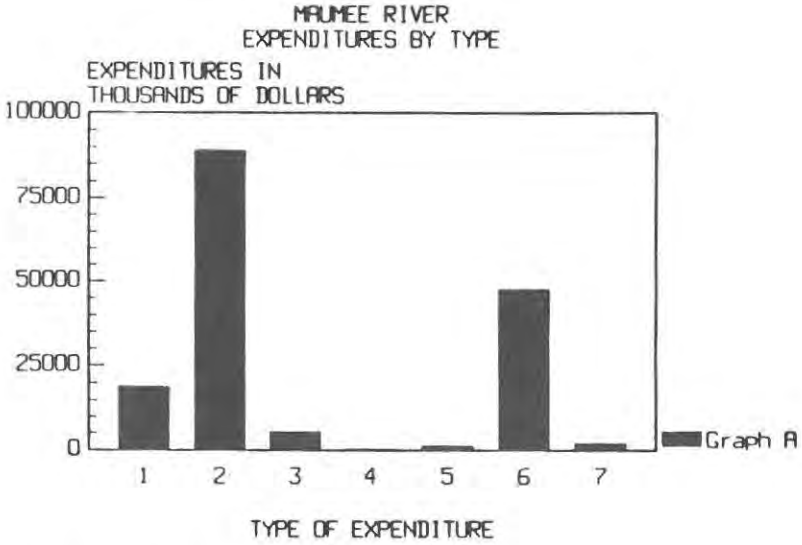


Figure 2. Expenditures (capital costs) for pollution control activities (point sources) for the Upper and Lower Scioto River, Grand River, and Maumee River based on "PTIs" (Permits to Install). Types of expenditures include 1: Publicly owned treatment works, 2: Industrial treatment facilities, 3: Pretreatment facilities, 4: On-lot systems, 5: Semi-public facilities, 6: Sewers, pumps, and lift stations, 7: Other.

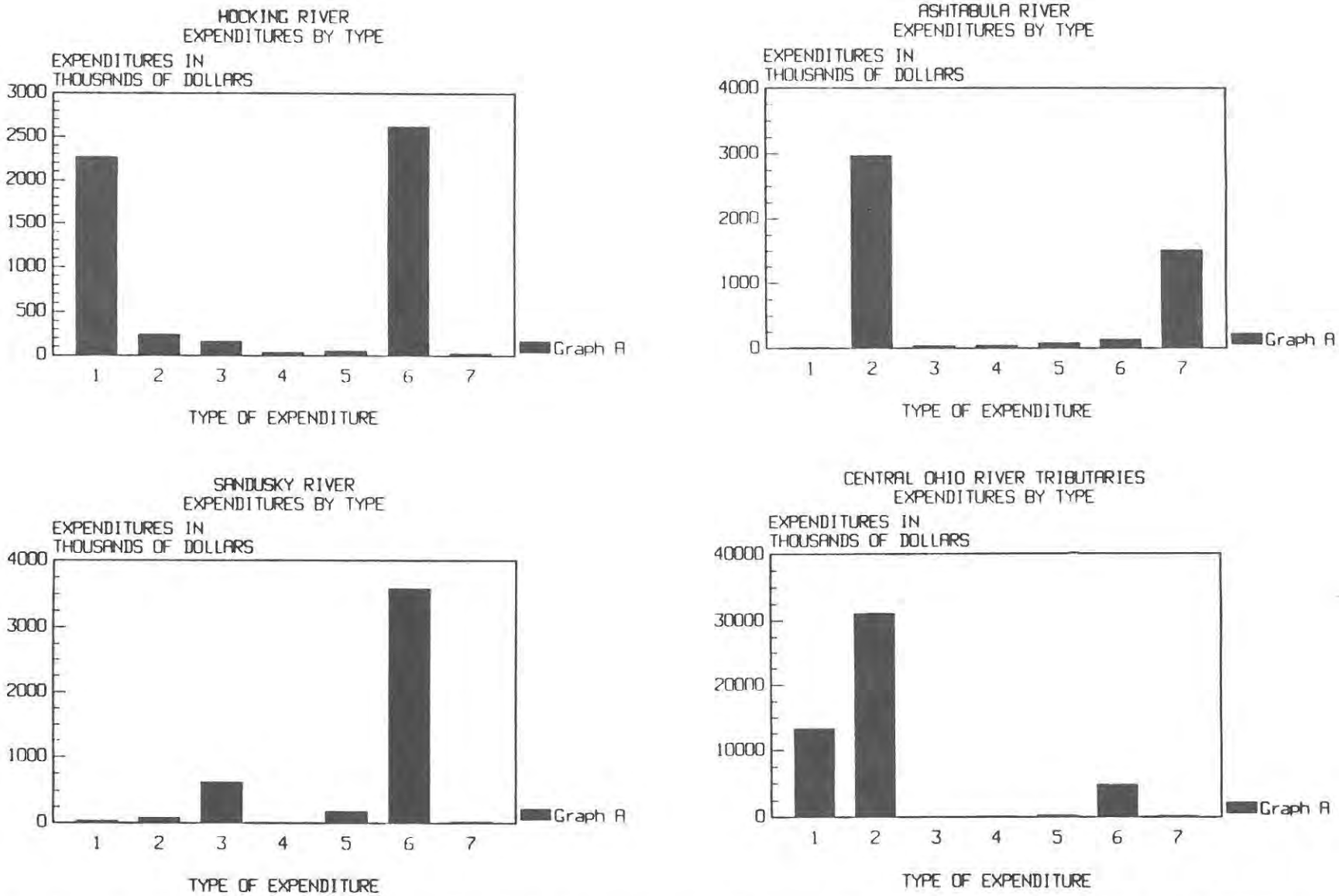


Figure 3. Expenditures (capital costs) for pollution control activities (point sources) for the Hocking River, Sandusky River, Ashtabula River and the Central Ohio River tributaries based on "PTIs" (Permits to Install). Types of expenditures include 1: Publicly owned treatment works, 2: Industrial treatment facilities, 3: Pretreatment facilities, 4: On-lot systems, 5: Semi-public facilities, 6: Sewers, pumps, and lift stations, 7:Other.

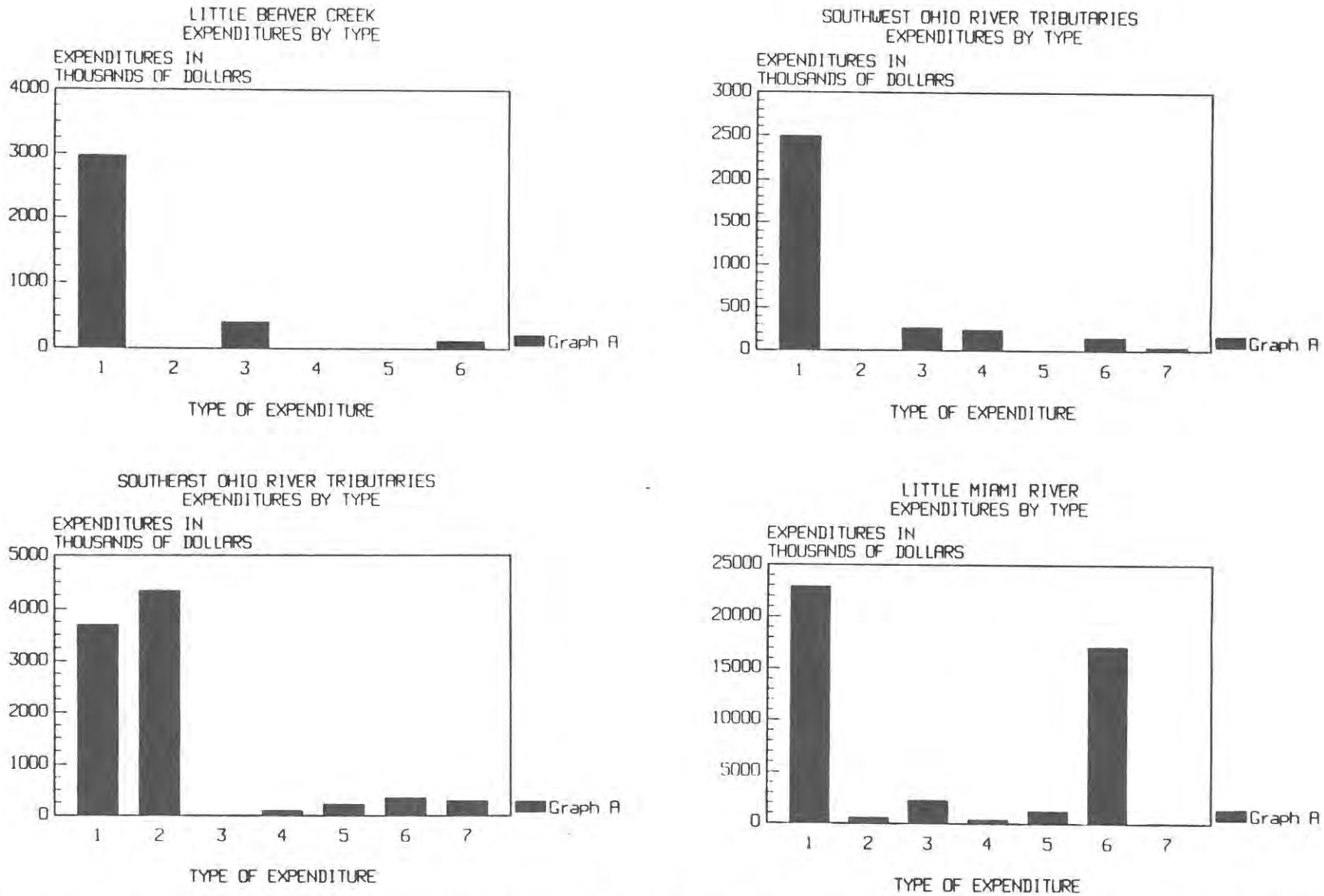


Figure 4. Expenditures (capital costs) for pollution control activities (point sources) for Little Beaver Creek, SE Ohio River tributaries, SW Ohio River tributaries, and the Little Miami River based on "PTIs" (Permits to Install). Types of expenditures include 1: Publicly owned treatment works, 2: Industrial treatment facilities, 3: Pretreatment facilities, 4: On-lot systems, 5: Semi-public facilities, 6: Sewers, pumps, and lift stations, 7:Other.

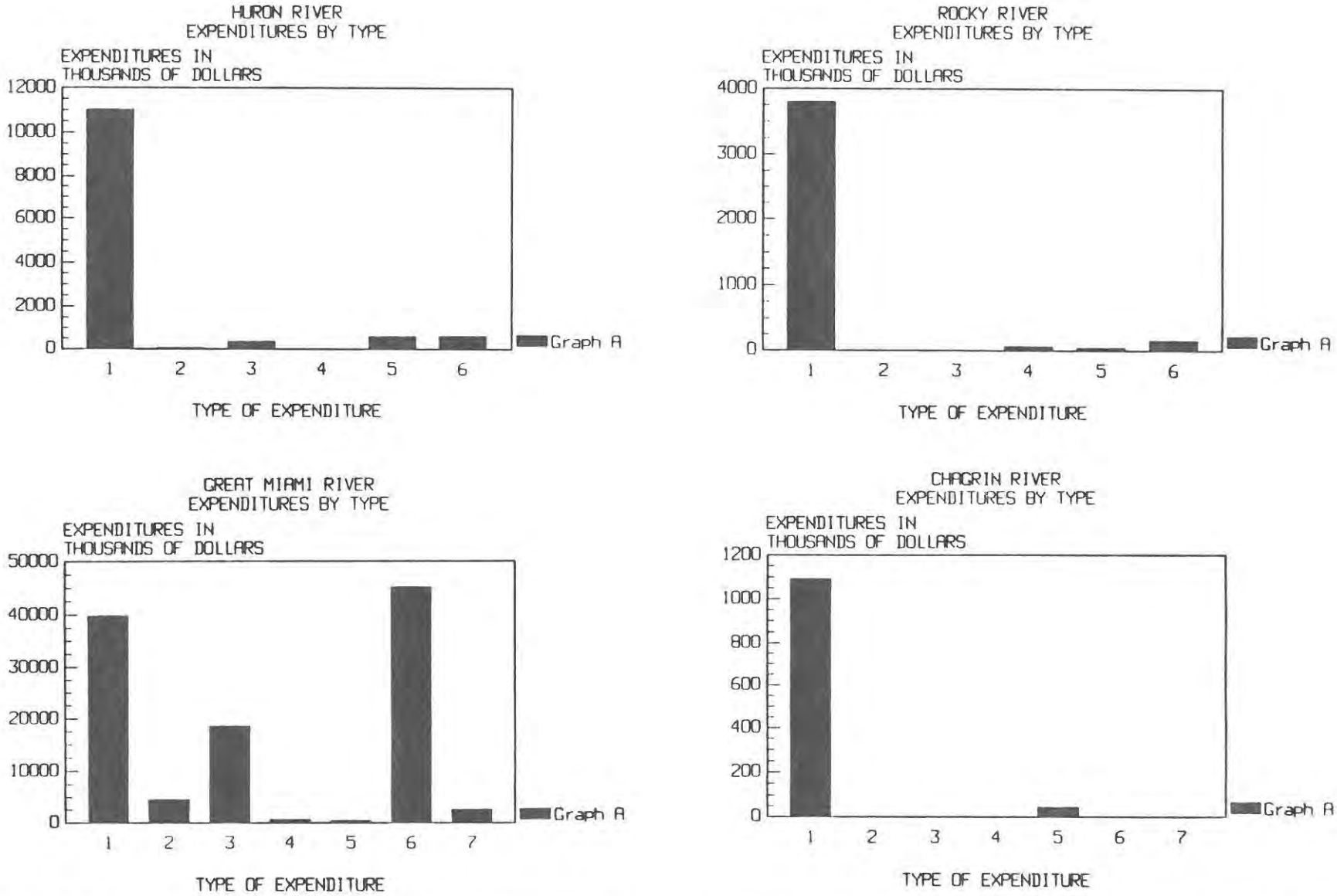


Figure 5. Expenditures (capital costs) for pollution control activities (point sources) for the Huron River, Great Miami River, Rocky River and Chagrin River based on "PTIs" (Permits to Install). Types of expenditures include 1: Publicly owned treatment works, 2: Industrial treatment facilities, 3: Pretreatment facilities, 4: On-lot systems, 5: Semi-public facilities, 6: Sewers, pumps, and lift stations, 7:Other.

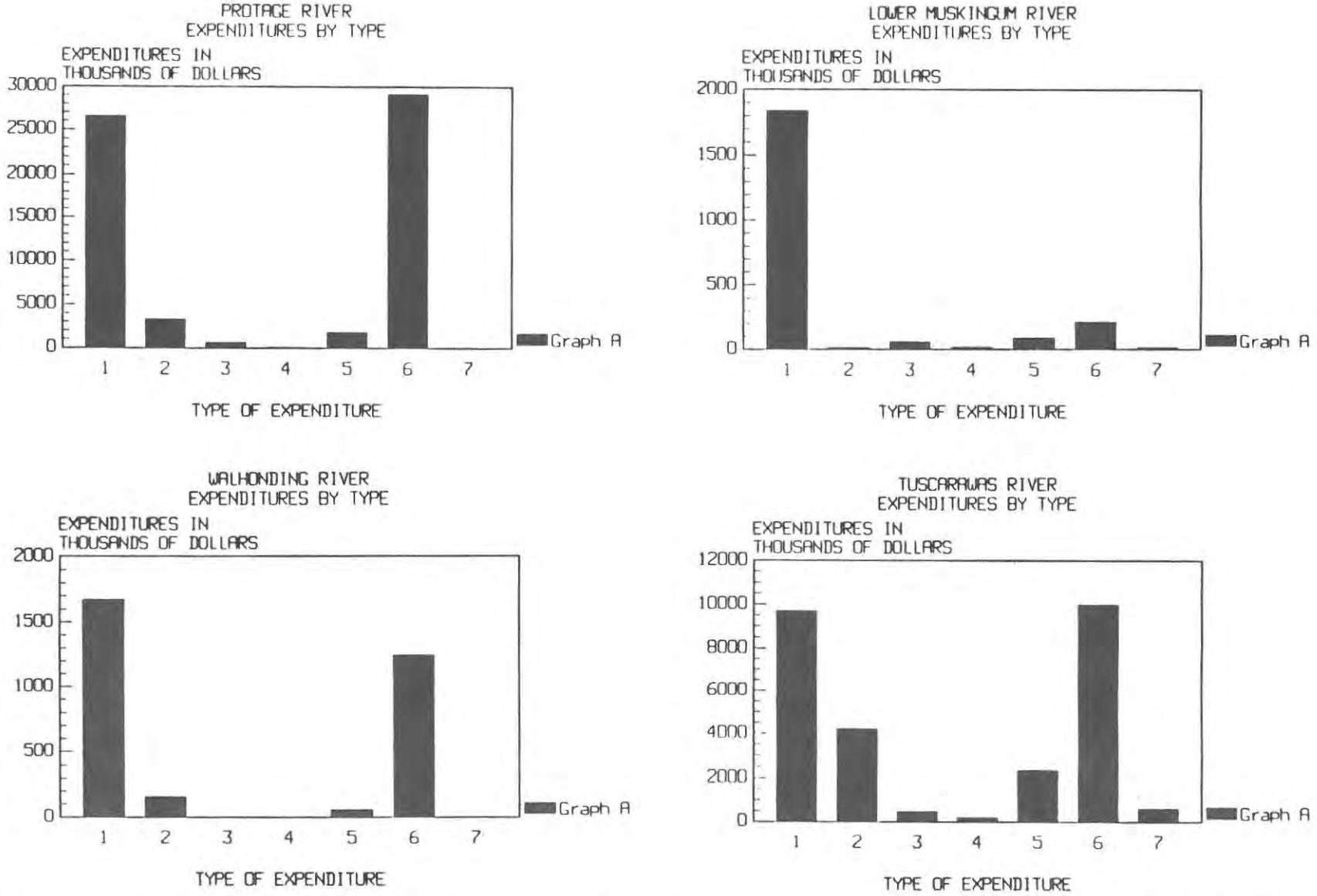


Figure 6. Expenditures (capital costs) for pollution control activities (point sources) for the Portage River, Walhonding River, Tuscarawas River and Lower Muskingum River based on "PTIs" (Permits to Install). Types of expenditures include 1: Publicly owned treatment works, 2: Industrial treatment facilities, 3: Pretreatment facilities, 4: On-lot systems, 5: Semi-public facilities, 6: Sewers, pumps, and lift stations, 7:Other.

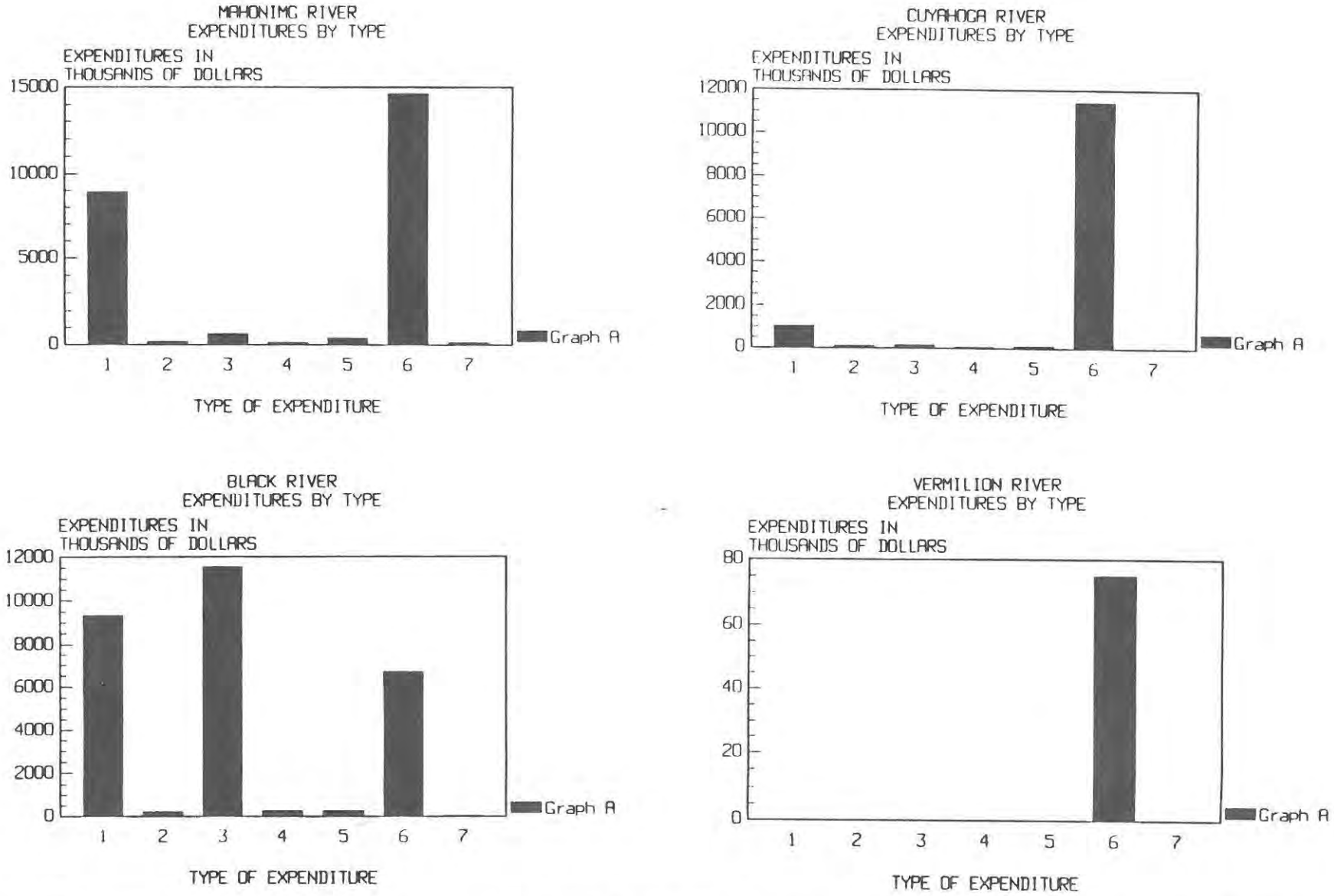


Figure 7. Expenditures (capital costs) for pollution control activities (point sources) for the Mahoning River, Black River, Cuyahoga River, and Vermilion River based on "PTIs" (Permits to Install). Types of expenditures include 1: Publicly owned treatment works, 2: Industrial treatment facilities, 3: Pretreatment facilities, 4: On-lot systems, 5: Semi-public facilities, 6: Sewers, pumps, and lift stations, 7:Other.

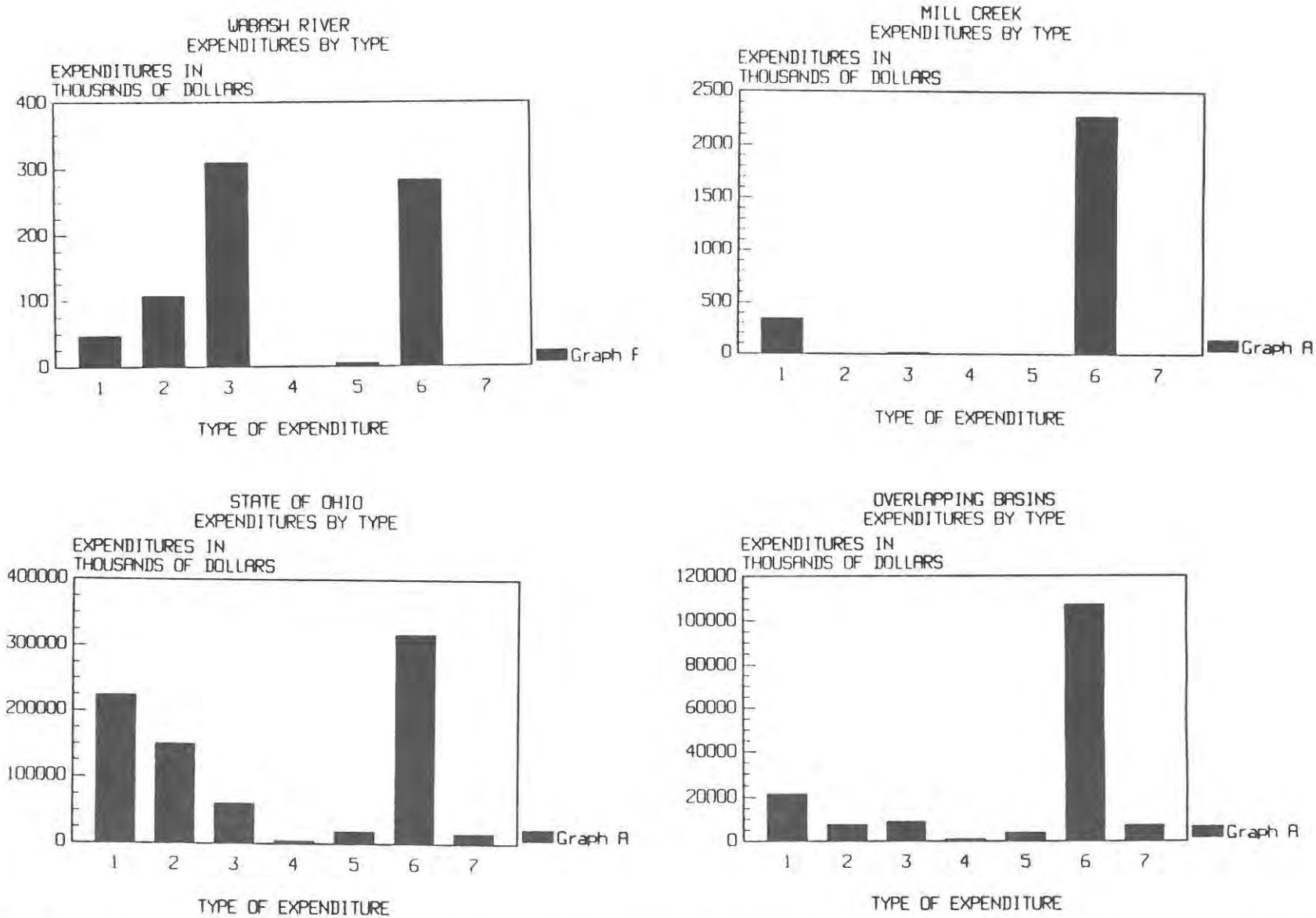


Figure 8. Expenditures (capital costs) for pollution control activities (point sources) for the Wabash River, Mill Creek, the entire State of Ohio and for overlapping basins based on "PTIs" (Permits to Install). Types of expenditures include 1: Publicly owned treatment works, 2: Industrial treatment facilities, 3: Pretreatment facilities, 4: On-lot systems, 5: Semi-public facilities, 6: Sewers, pumps, and lift stations, 7:Other.

Index

1990 Ohio Water Quality Inventory

Waterbody Name	WBID	River Code	Page
ABRAM CREEK	OH87 3	13-002	55
AIR PRODUCTS TRIB.	OH77 4.2	16-107	67
ALUM CREEK (COLUMBUS BOUNDARY TO BIG WALNUT C	OH38 2	02-110	7
AMANDA CREEK	OH25 4.2	01-440	2
ANDERSON FORK (GROG RUN TO CAESAR CREEK LAKE)	OH51 7	11-306	53
ANDERSON RUN	OH 7 23	06-105	34
ANDERSONS RUN	OH 2 15	18-023	88
APPLE CREEK	OH19 36	17-181	71
ARCHERS FORK	OH 8 18	06-420	37
ASHTABULA RIVER	OH93 5	07-001	40
AUGLAIZE RIVER (BLACKHOOF CREEK TO PUSHETA CR	OH70 20	04-100	22
AUGLAIZE RIVER (BLANCHARD R. TO L. AUGLAIZE R	OH70 1	04-100	21
AUGLAIZE RIVER (FLATROCK CREEK TO MAUMEE RIVE	OH71 1	04-100	22
AUGLAIZE RIVER (HEADWATERS TO BLACKHOOF CREEK	OH70 25	04-100	22
AUGLAIZE RIVER (JENNINGS CREEK TO OTTAWA RIVE	OH70 5	04-100	21
AUGLAIZE RIVER (L. AUGLAIZE R. TO FLATROCK CR	OH71 19	04-100	22
AUGLAIZE RIVER (OTTAWA RIVER TO BLANCHARD RIV	OH70 3	04-100	21
AUGLAIZE RIVER (PUSHETA CREEK TO TWOMILE CREE	OH70 17	04-100	22
AUGLAIZE RIVER (SIXMILE CREEK TO JENNINGS CRE	OH70 12	04-100	22
AUGLAIZE RIVER (TWOMILE CREEK TO AUGLAIZE RIV	OH70 13	04-100	22
AULTS RUN	OH 6 8	06-513	38
AURAND RUN	OH66 3.1	04-247	27
AURORA BRANCH	OH90 10	15-005	67
AUSTIN POWDER TRIB.	OH30 40	09-578	45
AX FACTORY RUN	OH 2 14	18-022	88
AYERS CREEK	OH76 12	16-206	68
B.F. GOODRICH TRIB	OH56 10.3	14-095	61
BAD CREEK (HEADWATERS TO UNNAMED TRIB. S OF D	OH73 2	04-026	19
BAD CREEK (TRIB. S. OF DELTA TO MAUMEE R.)	OH73 1	04-026	19
BAILEY RUN	OH29 31	09-212	43
BAKER FORK	OH 7 10	06-708	38
BALDWIN CREEK	OH87 5	13-101	55
BALLINGER RUN	OH57 39	14-219	64
BANKLICK CREEK	OH60 4	14-012	58
BANTAS FORK	OH59 7	14-505	65
BARBERS HOLLOW	OH 5 10	06-209	36
BAUGHMAN CREEK	OH91 26	03-022	17
BEAR CREEK	OH49 27	10-023	46
BEAR CREEK	OH60 27	14-029	59
BEAR CREEK (HEADWATERS TO OHIO/MICHIGAN BORDE	OH75 22	04-065	20
BEARS DEN RUN	OH 2 13	18-021	88
BEASLEY FORK	OH48 6	10-205	47
BEAVER CREEK	OH45 20	02-022	5
BEAVER CREEK	OH50 8	11-035	50
BEAVER CREEK	OH72 21	04-617	29
BEAVER CREEK	OH85 3	20-003	93
BEAVER CREEK (GRAND LAKE ST. MARYS TO WABASH	OH63 4	22-100	95
BEAVER CREEK (HEADWATERS TO BUCK CREEK)	OH58 16	14-111	62
BEAVER MEADOW CREEK	OH89 8.3	19-046	92
BEAVER RUN	OH22 58	17-233	73
BEAVERDAM CREEK (HEADWATERS TO TUSCARAWAS R.)	OH15 27	17-523	79
BELL LICK RUN	OH29 24	09-062	43
BELL RUN	OH22 60	17-234	73
BELLE CENTER TRIBUTARY	OH55 36.1	14-805	66
BEND FORK	OH 7 24	06-106	34
BERRYS RUN	OH 7 33	06-114	35
BIG CREEK	OH89 5	19-005	91
BIG CREEK	OH92 7	03-100	17
BIG DARBY CREEK (BUCK RUN TO SUGAR RUN)	OH39 22	02-200	9
BIG DARBY CREEK (DARBYVILLE TO SCIOTO RIVER)	OH39 1	02-200	9
BIG DARBY CREEK (FITZGERALD DITCH TO L. DARBY	OH39 19	02-200	9
BIG DARBY CREEK (HEADWATERS TO SPAIN CREEK)	OH39 31	02-200	10
BIG DARBY CREEK (HELLBRANCH RUN TO DARBYVILLE	OH39 2	02-200	9
BIG DARBY CREEK (L. DARBY CREEK TO HELLBARNCH	OH39 7	02-200	9
BIG DARBY CREEK (SPAIN CREEK TO BUCK RUN)	OH39 26	02-200	9
BIG DARBY CREEK (SUGAR RUN TO FITZGERALD DITC	OH39 21	02-200	9
BIG FOUR HOLLOW (LAKE HOPE)	OH30 56.1	09-583	45
BIG RUN	OH 7 17	06-045	33
BIG RUN	OH 7 48	06-048	33
BIG RUN	OH19 9	17-157	70
BIG RUN (PAULDING)	OH71 15.2	04-080	20
BIG WALNUT CREEK (ALUM/BLACKLICK CR. TO SCIOT	OH38 1	02-100	7
BIG WALNUT CREEK (CULVER CREEK TO L. WALNUT C	OH38 28	02-100	7
BIG WALNUT CREEK (HEADWATERS TO REYNOLDS RUN)	OH38 40	02-100	7
BIG WALNUT CREEK (HOOVER DAM TO ROCKY FORK)	OH38 20	02-100	7
BIG WALNUT CREEK (REYNOLDS RUN TO CULVER CR.)	OH38 36	02-100	7
BIG WALNUT CREEK (ROCKY FORK TO ALUM CREEK)	OH38 18	02-100	7
BLACK BROOK	OH92 2	03-002	17
BLACK CREEK	OH64 4	04-503	28
BLACK FK MOHICAN R(LEATHERWOOD CR TO WHETSTON	OH16 23	17-730	83
BLACK FK MOHICAN R.(HEADWATERS TO LEATHERWOOD	OH16 28	17-730	83
BLACK FK. MOHICAN R. (WHETSTONE CR TO ROCKY)	OH16 21	17-730	83

Waterbody Name	WBID	River Code	Page
BLACK FORK	OH23 43	17-308	75
BLACK FORK	OH32 35	09-730	46
BLACK FORK MOHICAN R. (ROCKY FK TO CLEAR FK)	OH16 16	17-730	83
BLACK RIVER	OH86 2	20-001	93
BLACKHAWK RUN	OH55 42	14-803	66
BLACKLICK CREEK	OH38 17	02-130	8
BLACKWATER CREEK	OH41 6.1	02-196	9
BLANCHARD (EAGLE CREEK TO OTTAWA CREEK)	OH66 3	04-160	24
BLANCHARD (THE OUTLET TO EAGLE CREEK)	OH66 10	04-160	24
BLANCHARD (THE OUTLET TO POTATO RUN)	OH66 18	04-160	24
BLANCHARD RIVER (CRANBERRY CREEK TO AUGLAIZE	OH67 1	04-160	24
BLANCHARD RIVER (HEADWATERS TO THE OUTLET)	OH66 21	04-160	24
BLANCHARD RIVER (OTTAWA CREEK TO RILEY CREEK)	OH67 20	04-160	24
BLANCHARD RIVER (POTATO RUN TO THE OUTLET)	OH66 13	04-160	24
BLANCHARD RIVER (RILEY CREEK TO CRANBERRY CRE	OH67 6	04-160	24
BLUE CREEK	OH46 51	02-737	16
BLUE CREEK (CUNNINGHAM CREEK TO AUGLAIZE RIVE	OH71 20	04-120	23
BLUE CREEK (HEADWATERS TO SWAN CREEK)	OH75 6	04-006	19
BLUEJACKET CREEK	OH55 18	14-077	60
BLUEROCK CREEK	OH62 15	14-006	58
BLUES CREEK	OH35 2	02-126	7
BLUNTNOSE CREEK (TRIB. TO RUSH CREEK)	OH25 20.1	01-501	3
BOKENGEHALAS CREEK	OH55 17	14-076	60
BOKES CREEK (BRUSH CREEK TO SCIOTO RIVER)	OH35 15	02-138	8
BOKES CREEK (HEADWATERS TO BRUSH RUN)	OH35 18	02-138	8
BRANDYWINE CREEK	OH89 13	19-010	91
BREAKNECK CREEK	OH88 8	19-028	91
BRIMFIELD DITCH	OH88 8.1	19-044	92
BROKENKNIFE CREEK	OH81 22	05-209	32
BROWNING RUN	OH15 18	17-516	79
BRUSH CREEK	OH 5 51	06-905	39
BRUSH CREEK	OH23 16	17-914	87
BRUSH CREEK	OH56 38	14-059	59
BRUSH CREEK	OH57 4	14-203	63
BRUSH CREEK	OH57 8	14-211	63
BRUSH CREEK	OH74 8	04-018	19
BRUSH CREEK (HEADWATERS TO TIFFIN RIVER)	OH72 18	04-614	29
BRUSHY FORK	OH14 20	17-380	76
BRUSHY FORK	OH22 9	17-207	72
BRUSHY FORK	OH30 59	09-571	45
BUCK CREEK	OH85 16	21-006	94
BUCK CREEK (BEAVER CREEK TO MAD RIVER)	OH58 15	14-110	61
BUCK CREEK (EAST FORK BUCK CREEK TO BEAVER CR	OH58 18	14-110	61
BUCK CREEK (HEADWATERS TO EAST FORK BUCK CREE	OH58 20	14-110	62
BUCK RUN	OH25 2	01-042	1
BUCK RUN	OH39 27	02-209	10
BUCK RUN	OH51 6	11-305	53
BUCK RUN	OH66 6	04-186	25
BUCK RUN	OH83 11.2	05-054	31
BUCKEYE CREEK	OH44 17	02-622	15
BUCKEYE FORK	OH23 28	17-315	75
BUFFALO CREEK	OH21 73	17-890	86
BUFFALO FORK	OH21 61	17-870	86
BULL CREEK	OH 4 6	08-103	41
BULLSKIN CREEK	OH49 31	10-027	46
BUSKIRK CREEK	OH41 14	02-305	12
BUTTERMILK CREEK	OH 4 24.1	08-208	42
CAESAR CREEK (CAESAR CREEK LAKE TO LITTLE MIA	OH51 1	11-300	53
CAESAR CREEK (S. BR. CAESAR CR. TO CAESAR CR	OH51 13	11-300	53
CAIRL CREEK (FORMERLY DRY CREEK)	OH75 5	04-005	19
CAMEL CREEK	OH19 47	17-190	71
CAMP CREEK	OH88 1.1	19-051	93
CAPTINA CREEK (BEND FORK TO OHIO RIVER)	OH 7 18	06-100	34
CAPTINA CREEK (N/S FORKS TO BEND FORK)	OH 7 28	06-100	34
CARBONDALE CREEK	OH30 50.1	09-586	45
CARROLL UNNAMED TRIB.	OH40 17	02-199	9
CARTER CREEK	OH64 31	04-519	28
CASWELL DITCH	OH83 3.3	05-058	31
CAT RUN	OH 7 19	06-101	34
CAVE RUN	OH48 15	10-213	47
CAVES CREEK	OH90 7.1	15-011	67
CEDAR CREEK	OH76 18	16-202	68
CEDAR LICK CREEK	OH 5 12	06-203	35
CEDAR RUN	OH22 23.3	17-278	74
CEMETERY CREEK	OH92 24	03-124	17
CENTER BRANCH	OH64 30	04-518	28
CENTER BRANCH RUSH CREEK	OH25 21	01-550	3
CENTER FORK	OH 5 73	06-933	40
CHAGRIN RIVER (AURORA BRANCH TO EAST BRANCH)	OH90 7	15-001	66
CHAGRIN RIVER (EAST BRANCH TO LAKE ERIE)	OH90 5	15-001	66
CHAGRIN RIVER (HEADWATERS TO AURORA BRANCH)	OH90 12	15-001	67
CHAMPIAN CREEK	OH87 15.1	13-212	56

Waterbody Name	WBID	River Code	Page
CHAPMAN CREEK	OH58 25	14-120	62
CHAPPEL CREEK	OH85 22	12-007	54
CHARLEMONT CREEK	OH86 18	20-024	94
CHEMLIME TRIB.	OH 4 34.1	08-308	42
CHENOWETH FORK	OH45 3	02-802	16
CHEROKEE MANS RUN	OH55 35	14-084	60
CHERRY FORK	OH48 22	10-224	47
CHERRY VALLEY RUN	OH 4 26	08-207	42
CHILDRENS HOME DITCH	OH41 30.1	02-322	12
CHIPPEWA CREEK	OH89 12	19-009	91
CHIPPEWA CREEK (HEADWATERS TO STEELE DITCH)	OH10 21	17-550	80
CHIPPEWA CREEK (STEELE DITCH TO TUSCARAWAS R)	OH10 13	17-550	80
CHRISTMAS RUN	OH19 38.1	17-192	71
CLAY CREEK	OH56 32.1	14-614	66
CLEAR CREEK	OH25 4	01-400	2
CLEAR CREEK	OH43 49	02-540	14
CLEAR CREEK	OH60 22	14-024	59
CLEAR CREEK	OH85 17	21-007	94
CLEAR FORK	OH 8 29	06-430	37
CLEAR FORK	OH22 30	17-257	74
COFFEE CREEK	OH91 24	03-021	17
COLD SPRING RUN	OH12 10	17-115	70
COLLINS FORK	OH21 69	17-878	86
COLLINS RUN	OH 8 81	06-015	33
COLUMBIA DITCH	OH34 1.2	02-235	11
COMPTON CREEK (HEADWATERS TO NORTH FK. PAINT	OH43 15	02-522	14
CONNEAUT CREEK (OH./PA. BORDER TO LAKE ERIE)	OH93 3	07-100	40
CONOTTON CREEK	OH12 1	17-100	69
CONOTTON CREEK	OH12 13	17-100	69
CONOTTON CREEK	OH12 19	17-100	69
COON CREEK	OH43 49.1	02-588	15
COOPER TIRE DITCH TO OIL DITCH (FINDLAY)	OH66 4.1	04-251	27
COTTONWOOD DITCH	OH34 32	02-188	9
COULLEY FORK	OH32 25	09-720	46
COWAN CREEK	OH52 11	11-209	52
COWLES CREEK	OH93 16	07-007	40
CRAB CREEK	OH 2 10	18-011	88
CRABAPPLE CREEK	OH 7 29	06-110	34
CRANBERRY CREEK	OH85 23	12-006	53
CRANBERRY RUN	OH 2 16	18-024	88
CRANBERRY RUN	OH67 11	04-169	25
CRANE CREEK	OH76 11	16-205	68
CRANE RUN	OH21 62	17-871	86
CRESTLINE TRIBUTARY	OH80 24	05-056	31
CRESTLINE WWTP TRIBUTARY	OH80 23	05-055	31
CRIDERSVILLE TRIBUTARY	OH68 16.1	04-245	27
CROOKED CREEK	OH15 30	17-526	79
CROOKED CREEK	OH21 31	17-830	85
CROSS CREEK (HEADWATERS TO SALEM CREEK)	OH 5 14	06-200	35
CROSS CREEK (MCINTYRE CREEK TO OHIO R.)	OH 5 1	06-200	35
CROSS CREEK (SALEM CREEK TO MCINTYRE)	OH 5 9	06-200	35
CROSSES RUN	OH35 8	02-133	8
CUYAHOGA RIVER (BIG CREEK TO SHIP CHANNEL (5.	OH89 32	19-001	90
CUYAHOGA RIVER (BLACK BR. TO CONGESS LK OUT)	OH88 11	19-001	90
CUYAHOGA RIVER (BRANDYWINE CR. TO TINKERS CR)	OH89 11	19-001	90
CUYAHOGA RIVER (CONGRESS LK OUT TO L. CUY. R)	OH88 5	19-001	90
CUYAHOGA RIVER (L. CUYAHOGA R. TO YELLOW CR.)	OH89 27	19-001	90
CUYAHOGA RIVER (SHIP CHANNEL (5.5) TO LAKE ER	OH89 1	19-001	90
CUYAHOGA RIVER (TINKERS CREEK TO BIG CREEK)	OH89 6	19-001	90
CUYAHOGA RIVER (YELLOW CREEK TO BRANDYWINE CR	OH89 14	19-001	90
DACE DITCH (AMANDA)	OH25 4.1	01-441	2
DARBY CREEK	OH85 20	12-009	54
DEEP RUN	OH 6 49	06-058	33
DEER CREEK	OH72 33	04-628	29
DEER CREEK (BRADFORD/SUGAR CREEK TO DEER CR.	OH41 18	02-300	12
DEER CREEK (DEER CREEK DAM TO DRY RUN)	OH41 12	02-300	11
DEER CREEK (DRY RUN TO HAY RUN)	OH41 11	02-300	11
DEER CREEK (HAY RUN TO SCIOTO RIVER)	OH41 7	02-300	11
DEER CREEK (HEADWATERS TO OAK RUN)	OH41 30	02-300	12
DEER CREEK (OAK RUN TO BRADFORD CREEK)	OH41 26	02-300	12
DEER LICK RUN	OH89 8.2	19-048	92
DICKASON RUN	OH30 5	09-514	44
DICKS CREEK(HDWTRS TO GREAT MIAMI R.)	OH60 14	14-018	58
DISHER DITCH	OH71 20.1	04-073	20
DISMAL CREEK	OH 8 48	06-444	37
DISMAL CREEK	OH57 35	14-232	64
DODSON CREEK	OH53 57	11-151	51
DOG CREEK	OH69 17	04-145	23
DOG HOLLOW RUN	OH22 32	17-259	74
DOMER DITCH	OH11 6.1	17-477	77
DOUGHTY CREEK	OH19 4	17-153	70
DRENNAN DITCH	OH75 4.1	04-087	21

Waterbody Name	WBID	River Code	Page
DRY CREEK	OH69 10	04-138	23
DRY FORK	OH 5 2	06-201	35
DRY RUN	OH22 25	17-252	74
DRY RUN	OH41 13	02-304	12
DRY RUN	OH54 25	11-022	49
DUCK CREEK	OH 2 38	18-029	89
DUCK CREEK	OH54 4	11-004	49
DUCK CREEK	OH75 2	04-002	18
DUCK CREEK (E/W FORK DUCK CREEK TO OHIO R.)	OH 9 2	06-300	36
DUGAN DITCH	OH58 20.1	14-145	63
DUGAN RUN	OH58 44	14-128	62
DUNKLE RUN	OH25 8	01-430	2
DURBIN RUN	OH25 13	01-510	3
DUTCH CREEK	OH52 18	11-215	52
E. FK. LITTLE MIAMI (EAST FK LAKE TO STONELIC	OH53 16	11-100	50
E. FK. LITTLE MIAMI R. (DODSON CR. TO SOLOMON	OH53 52	11-100	51
E. FK. LITTLE MIAMI R. (EAST FORK LAKE)	OH53 20	11-100	50
E. FK. LITTLE MIAMI R. (HEADWATERS TO DODSON	OH53 60	11-100	51
E. FK. LITTLE MIAMI R. (HOWARD RUN TO TODD RU	OH53 36	11-100	50
E. FK. LITTLE MIAMI R. (SOLOMON RUN TO HOWARD	OH53 45	11-100	50
E. FK. LITTLE MIAMI R. (STONELICK CR. TO L. M	OH53 1	11-100	50
E. FK. WEST MANSFIELD TRIB.	OH35 22	02-195	9
E. FK. WHITEWATER R. (HEADWATERS TO OHIO/INDA	OH61 5	14-308	64
EAGLE CREEK	OH 1 3	18-040	89
EAGLE CREEK	OH 1 8	18-040	89
EAGLE CREEK	OH66 5	04-185	25
EAGLE CREEK (HEADWATERS TO ST. JOSEPH RIVER)	OH65 34	04-411	27
EAGLE CREEK(E/N FORK EAGLE CREEK TO OHIO RIVE	OH47 27	10-100	46
EAST BRANCH (HILL SPAULDING DITCH TO W BR BLA	OH86 4	20-010	93
EAST BRANCH CHAGRIN RIVER	OH90 6	15-002	67
EAST BRANCH HURON R. (HEADWATERS TO NORWALK C	OH84 7	12-100	54
EAST BRANCH JELLOWAY CREEK	OH18 7	17-656	82
EAST BRANCH MIDDLE FORK	OH 4 25	08-206	42
EAST BRANCH MONTVILLE LANDFILL TRIB.	OH87 18.1	13-213	56
EAST BRANCH NIMISHILLEN CREEK	OH11 11	17-463	77
EAST BRANCH PORTAGE RIVER	OH77 8	16-105	67
EAST BRANCH RACCOON CREEK	OH30 63	09-574	45
EAST BRANCH ROCKY RIVER (HEADWATERS TO HEALEY	OH87 8	13-100	55
EAST BRANCH ROCKY RIVER (HEALEY CREEK TO ROCK	OH87 4	13-100	55
EAST BRANCH VERMILION RIVER	OH85 10	21-003	94
EAST FORK BUCK CREEK	OH58 19	14-113	62
EAST FORK EAST BRANCH BLACK RIVER	OH86 10	20-014	93
EAST FORK MILL CREEK	OH62 31	23-006	95
EAST FORK PINEY FORK	OH 7 7	06-705	38
EAST FORK STATELINE CREEK	OH 4 11.2	08-118	41
EAST FORK TODD FORK	OH52 8.1	11-217	53
EAST FORK WHITEOAK CREEK	OH49 60	10-420	48
ELK CREEK	OH60 19	14-022	59
ELK FORK	OH30 35	09-530	45
ELK FORK	OH48 29	10-230	47
ELK RUN	OH23 39	17-304	75
ELKHORN CREEK	OH 5 71	06-931	40
ELM RUN	OH13 16	17-405	76
EUCLID CREEK	OH90 16	19-041	92
EVANS CREEK	OH15 6	17-505	78
EVANS DITCH	OH69 20.1	04-159	24
EVERSOLE RUN	OH37 27	02-108	7
EWING RUN (BALDWIN RUN)	OH25 25	01-046	1
FEDERAL CREEK (MCDOUGALL BRANCH TO HOCKING R)	OH27 14	01-100	1
FIELDS BROOK	OH93 6	07-010	40
FIFTEEN MILE CREEK	OH 8 11	06-410	36
FIRST CREEK	OH52 1	11-201	52
FISH CREEK	OH 1 33	18-063	89
FIVEMILE CREEK	OH53 42	11-138	51
FLAT BRANCH	OH39 33	02-223	10
FLAT FORK	OH51 2	11-301	53
FLAT FORK	OH70 8	04-231	26
FLATROCK CREEK (OH./IND. BORDER TO WILDCAT CR	OH71 16	04-109	22
FLATROCK CREEK (WILDCAT CREEK TO AUGLAIZE RIV	OH71 15	04-109	22
FLINT RUN	OH30 12	09-520	44
FORD BRANCH BIG CREEK	OH89 5.1	19-045	92
FOURMILE CREEK	OH44 18	02-623	15
FOURMILE CREEK (L. FOURMILE CR. TO SEVENMILE	OH61 24	14-400	65
FOURMILE CREEK (SEVENMILE CREEK TO GREAT MIAM	OH61 11	14-400	65
FOX RUN	OH10 11	17-537	79
FRENCH CREEK	OH86 3	20-002	93
FULTON CREEK	OH35 25	02-145	8
FURNACE RUN	OH89 24	19-020	91
GANT CREEK	OH12 12	17-117	70
GEORGES CREEK	OH40 12	02-084	6
GEORGES RUN	OH41 17	02-307	12
GILROY DITCH	OH50 25	11-044	50

Waterbody Name	WBID	River Code	Page
GLADY CREEK	OH58 49	14-137	62
GLADY RUN	OH50 5	11-032	49
GLADY RUN	OH53 48	11-143	51
GLENDALE TRIB.	OH62 30.1	23-010	95
GOECKE TRIBUTARY	OH70 13.1	04-074	20
GOOSE RUN	OH30 9	09-517	44
GORDON CREEK	OH65 6	04-052	19
GRAND RIVER (COFFEE CREEK TO HOSKINS CREEK)	OH91 14	03-001	17
GRAND RIVER (ESTUARY)	OH92 1.1	03-001	17
GRAND RIVER (HEADWATERS TO MUD CREEK)	OH91 28	03-001	16
GRAND RIVER (MILL CREEK TO MILL CREEK)	OH92 20	03-001	16
GRAND RIVER (MILL CREEK TO PAINE CREEK)	OH92 16	03-001	16
GRAND RIVER (MUD CREEK TO COFFEE CREEK)	OH91 25	03-001	16
GRAND RIVER (PAINE CREEK TO LAKE ERIE)	OH92 1	03-001	17
GREAT MIAMI R. (BOKENGEHALAS CR. TO INDIAN CR	OH55 11	14-001	57
GREAT MIAMI R. (MUCHINIPPI CR. TO BOKENGEHALA	OH55 20	14-001	57
GREAT MIAMI R.(DICKS CR TO FOURMILE CR)	OH60 9	14-001	57
GREAT MIAMI RIVER (BEAR CREEK TO TOWN CREEK)	OH60 21	14-001	57
GREAT MIAMI RIVER (DRY RUN TO TAYLOR CREEK)	OH62 13	14-001	57
GREAT MIAMI RIVER (FOURMILE CREEK TO DRY RUN)	OH60 1	14-001	57
GREAT MIAMI RIVER (INDIAN CREEK TO PLUM CREEK	OH55 2	14-001	56
GREAT MIAMI RIVER (INDIAN LAKE TO MUCHINIPPI	OH55 34	14-001	57
GREAT MIAMI RIVER (LORAMIE CREEK TO SPRING CR	OH56 12	14-001	57
GREAT MIAMI RIVER (LOST CREEK TO STILLWATER R	OH56 1	14-001	57
GREAT MIAMI RIVER (PLUM CREEK TO LORAMIE CREE	OH56 36	14-001	57
GREAT MIAMI RIVER (SPRING CREEK TO LOST CREEK	OH56 10	14-001	57
GREAT MIAMI RIVER (STILLWATER RIVER TO WOLF C	OH60 41	14-001	57
GREAT MIAMI RIVER (TAYLOR CREEK TO OHIO RIVER	OH62 1	14-001	57
GREAT MIAMI RIVER (TWIN CREEK TO DICKS CREEK)	OH60 18	14-001	57
GREAT MIAMI RIVER (WOLF CREEK TO BEAR CREEK)	OH60 33	14-001	57
GREEN CREEK	OH82 2	05-100	32
GREENVILLE CREEK (DIVIDING BR. TO STILLWATER	OH57 21	14-220	64
GREENVILLE CREEK (HEADWATERS TO WEST BRANCH)	OH57 32	14-220	64
GREENVILLE CREEK (WEST BR. TO DIVIDING BR.)	OH57 26	14-220	64
GREGORY CREEK(HDWTRS TO GREAT MIAMI R.)	OH60 12	14-016	58
GRIES DITCH	OH82 21.1	05-223	32
GROVE RUN	OH40 25	02-089	6
GUM RUN	OH51 2.1	11-314	53
GUSTIN DITCH	OH56 8.1	14-091	60
HAEFNER DITCH	OH75 16.3	04-088	21
HAGERMAN CREEK	OH69 8	04-137	23
HARDIN CREEK	OH63 10	22-106	95
HARDY RUN	OH19 16	17-163	71
HARLANS RUN	OH51 2.2	11-313	53
HARRIS RUN	OH57 38	14-218	64
HARTVILLE DITCH	OH11 10.2	17-482	77
HAWKINS RUN	OH21 40	17-842	86
HAY RUN	OH41 9	02-302	12
HEALEY CREEK	OH87 9	13-104	55
HELLBRANCH RUN	OH39 6	02-204	10
HENRY CREEK	OH76 14	16-208	68
HEWETT FORK	OH30 50	09-563	45
HICKEY DITCH	OH74 9	04-070	20
HILL DITCH	OH75 16.1	04-089	21
HINES RUN	OH 2 3	18-005	88
HIRAM TRIB.	OH 1 11	18-065	89
HOCKING RIVER (ATHENS TO FEDERAL CREEK)	OH27 39	01-001	1
HOCKING RIVER (HEADWATERS TO RUSH CREEK)	OH25 23	01-001	1
HOCKING RIVER (MONDAY CREEK TO ATHENS)	OH26 1	01-001	1
HOCKING RIVER (RUSH CREEK TO CLEAR CREEK)	OH25 1	01-001	1
HOCKING RIVER (SCOTT CREEK TO MONDAY CREEK)	OH26 36	01-001	1
HOG HOLLOW RUN	OH22 23.1	17-277	74
HOLES CREEK	OH60 35	14-036	59
HOLLOW ROCK RUN	OH 5 40	06-902	39
HOLMES BROOK	OH10 17	17-554	80
HONEY CREEK	OH 4 12	08-114	41
HONEY CREEK	OH34 2	02-159	8
HONEY CREEK	OH56 3	14-043	59
HONEY CREEK (BROKEN KNIFE CREEK TO SILVER CRE	OH81 13	05-200	32
HONEY CREEK (HEADWATERS TO BROKEN KNIFE CREEK	OH81 21	05-200	32
HONEY CREEK (SILVER CREEK TO SANDUSKY RIVER)	OH81 11	05-200	32
HOOVER DITCH	OH11 8.2	17-480	77
HUFF RUN	OH12 2	17-101	69
HUFFMAN CREEK	OH70 24	04-240	26
HUNTERS RUN	OH25 27	01-048	1
HUNTINGCAMP CREEK	OH32 40	09-735	46
HURFORD RUN	OH11 6	17-468	77
HURON RIVER (EAST BRANCH TO LAKE ERIE)	OH84 1	12-001	53
HUSSEY RUN	OH43 50	02-541	14
INDIAN CREEK	OH31 50	09-539	45
INDIAN CREEK	OH57 42	14-236	64
INDIAN CREEK	OH60 2	14-010	58

Waterbody Name	WBID	River Code	Page
INDIAN CREEK	OH82 14	05-004	30
INDIAN CREEK	OH89 13.1	19-055	93
INDIAN FORK	OH12 5	17-110	70
INDIAN GUYAN CREEK (L. INDIAN GUYAN CR. TO OH	OH31 2	09-100	43
INDIAN RUN	OH 2 17	18-025	88
INDIAN RUN	OH11 13	17-454	76
INDIAN RUN	OH37 19.1	02-238	11
INFIRMARY RUN	OH21 41	17-843	86
IRISH CREEK	OH12 23	17-120	70
ISLAND CREEK	OH 5 29	06-070	33
JAKES RUN	OH 7 37	06-124	35
JAMISON CREEK	OH17 22	17-726	83
JEFFERSON CREEK	OH12 27	17-123	70
JELLOWAY CREEK	OH18 5	17-654	82
JENNINGS CREEK	OH70 7	04-230	26
JENNINGS DITCH	OH19 31.3	17-196	72
JEROME FORK	OH17 24	17-718	82
JEROME FORK MOHICAN R. (LANG CR. TO LAKE FK)	OH17 14	17-718	82
JOHN LATTANER DITCH	OH65 38	04-418	28
JONATHAN CREEK (BUCKEYE FORK TO MOXAHALA CREE	OH23 22	17-310	75
JONATHAN CREEK (HEADWATERS TO BUCKEYE FORK)	OH23 27	17-310	75
JONES DITCH	OH41 28.1	02-320	12
JOY FORK	OH 7 26	06-108	34
KAKOTAWA CREEK	OH17 20	17-724	83
KALE CREEK	OH 1 21	18-048	89
KENT RUN	OH23 25	17-313	75
KENTON CREEK	OH58 24.1	14-143	63
KIAN RUN	OH37 7	02-197	9
KIATA CREEK	OH62 5.1	14-319	65
KIBER RUN	OH22 52	17-227	73
KILLBUCK CREEK (APPLE CREEK TO SALT CREEK)	OH19 31	17-150	70
KILLBUCK CREEK (BLACK CREEK TO DOUGHTY CREEK)	OH19 8	17-150	70
KILLBUCK CREEK (DOUGHTY CR. TO WALHONDING R.)	OH19 1	17-150	70
KILLBUCK CREEK (SALT CREEK TO SAPPS RUN)	OH19 23	17-150	70
KILLBUCK CREEK (SAPPS RUN TO BLACK RUN)	OH19 14	17-150	70
KILLBUCK CREEK (SHADE CREEK TO APPLE CREEK)	OH19 38	17-150	70
KILLBUCK DITCH	OH19 44.1	17-199	72
KINGS CREEK	OH58 47	14-136	62
KINGS RUN	OH 6 7	06-512	38
KINGSBURY RUN	OH89 2	19-002	91
KOA TRIB.	OH77 4.1	16-106	67
KOKOSING RIVER (HEADWATERS TO N BR KOKOSING)	OH18 34	17-650	82
KOKOSING RIVER (JELLOWAY CREEK TO MOHICAN R.)	OH18 1	17-650	81
KOKOSING RIVER (N BR KOKOSING R TO WOLF RUN)	OH18 22	17-650	82
KOKOSING RIVER (WOLF RUN TO JELLOWAY CREEK)	OH18 12	17-650	82
KONZEN DITCH	OH73 17	04-038	19
KOPP CREEK	OH64 26	04-524	28
KYGER CREEK	OH29 19	09-057	43
L. CUYAHOGA R. (HEADWATERS TO WINGFOOT LAKE O	OH88 4	19-030	92
L. CUYAHOGA R. (WINGFOOT LAKE OUT. TO CUYAHOG	OH88 1	19-030	92
L. STILLWATER CREEK	OH14 2	17-360	75
LAKE FORK	OH22 33	17-260	74
LANG CREEK	OH17 21	17-725	83
LEADING CREEK (DEXTER RUN TO L. LEADING CR.)	OH29 35	09-200	43
LEADING CREEK (HEADWATERS TO DEXTER RUN)	OH29 39	09-200	43
LEADING CREEK (LITTLE LEADING CR. TO OHIO R.)	OH29 28	09-200	43
LEATHERWOOD CREEK	OH16 29	17-740	83
LEATHERWOOD CREEK	OH21 38	17-840	85
LEATHERWOOD DITCH	OH68 9	04-207	26
LEBANON CREEK	OH91 5	03-134	17
LEITH RUN	OH 8 78	06-013	32
LESLIE RUN	OH 4 7	08-104	41
LICK CREEK	OH48 13	10-211	47
LICK CREEK (HEADWATERS TO LITTLE LICK CREEK)	OH72 13	04-609	29
LICK CREEK (LITTLE LICK CREEK TO TIFFIN RIVER	OH72 10	04-609	29
LICK RUN	OH52 5	11-204	52
LICKING RIVER (DILLON RES. TO MUSKINGUM RIVER	OH22 1	17-200	72
LICKING RIVER (NORTH FORK TO ROCKY FORK)	OH22 16	17-200	72
LICKING RIVER (ROCKY FORK TO DILLON RES.)	OH22 5	17-200	72
LISBON FORK	OH50 24	11-043	50
LITTLE APPLE CREEK	OH19 37	17-182	71
LITTLE AUGLAIZE R. (DOG CREEK TO AUGLAIZE RIV	OH69 1	04-130	23
LITTLE AUGLAIZE RIVER (EVANS DITCH TO DOG CRE	OH69 20	04-130	23
LITTLE AUGLAIZE RIVER (HEADWATERS TO EVANS DI	OH69 25	04-130	23
LITTLE BEAVER CREEK	OH45 21	02-023	5
LITTLE BEAVER CREEK	OH50 9	11-036	50
LITTLE BEAVER CREEK (MIDDLE FK TO NORTH FK)	OH 4 14	08-001	41
LITTLE BEAVER CREEK (NORTH FORK TO PA.)	OH 4 1	08-001	41
LITTLE CAPTINA CREEK	OH 7 46	06-046	33
LITTLE CHIPPEWA CREEK	OH10 19	17-556	80
LITTLE CREEK	OH52 15	11-213	52
LITTLE DARBY CREEK	OH39 31.2	02-251	11

Waterbody Name	WBID	River Code	Page
LITTLE DARBY CREEK (HEADWATERS TO TREACLE CRE	OH39 15	02-210	10
LITTLE DARBY CREEK (SPRING FORK TO BIG DARBY	OH39 8	02-210	10
LITTLE DARBY CREEK (TREACLE CREEK TO SPRING F	OH39 10	02-210	10
LITTLE DEER CREEK	OH 3 2	18-505	90
LITTLE EAST FORK	OH48 33	10-216	47
LITTLE INDIAN CREEK	OH31 51	09-540	45
LITTLE JELLOWAY CREEK	OH18 6	17-655	82
LITTLE KILLBUCK CREEK	OH19 40	17-184	71
LITTLE LEADING CREEK	OH29 34	09-201	43
LITTLE MCMAHON CREEK	OH 6 5	06-510	37
LITTLE MIAMI R. (O'BANNON CR. TO E. FK. L. MI	OH54 7	11-001	48
LITTLE MIAMI RIVER (BEAVER CREEK TO GLADY RUN	OH50 4	11-001	48
LITTLE MIAMI RIVER (CAESAR CREEK TO TODD FORK	OH54 30	11-001	49
LITTLE MIAMI RIVER (E. FK. L. MIAMI R. TO OHI	OH54 1	11-001	48
LITTLE MIAMI RIVER (GLADY RUN TO CAESAR CREEK	OH50 1	11-001	48
LITTLE MIAMI RIVER (HEADWATERS TO NORTH FORK)	OH50 23	11-001	48
LITTLE MIAMI RIVER (MASSIES CREEK TO BEAVER C	OH50 10	11-001	48
LITTLE MIAMI RIVER (TODD FORK TO TURTLE CREEK	OH54 27	11-001	49
LITTLE MIAMI RIVER (TURTLE CR. TO O'BANNON CR	OH54 16	11-001	49
LITTLE MIAMIRIVER (NORTH FORK TO MASSIES CREE	OH50 17	11-001	48
LITTLE MILL CREEK	OH20 28	17-613	81
LITTLE MUSKINGUM R. (CLEAR FK TO FIFTEENMILE)	OH 8 15	06-400	36
LITTLE MUSKINGUM R. (FIFTEENMILE C TO OHIO R)	OH 8 1	06-400	36
LITTLE MUSKINGUM R. (RICH FORK TO WITTEN FK)	OH 8 53	06-400	36
LITTLE OTTAWA RIVER	OH68 16	04-213	26
LITTLE RACCOON CREEK	OH83 11.1	05-053	31
LITTLE RACCOON CREEK (DICKASON RUN TO RACCOON	OH30 1	09-510	44
LITTLE RACCOON CREEK (HEADWATERS TO SAND RUN)	OH30 17	09-510	44
LITTLE RACCOON CREEK (SAND RUN TO DICKASON RU	OH30 7	09-510	44
LITTLE ROCK CREEK	OH43 49.2	02-587	15
LITTLE RUSH CREEK	OH25 16	01-540	3
LITTLE SALT CREEK	OH23 11	17-950	87
LITTLE SALT CREEK (BUCKEYE CREEK TO SALT CREE	OH44 3	02-610	15
LITTLE SALT CREEK (HEADWATERS TO BUCKEYE CREE	OH44 16	02-610	15
LITTLE SCIOTO RIVER (HEADWATERS TO ROCK FORK)	OH34 3	02-158	8
LITTLE SCIOTO RIVER (ROCK FORK TO SCIOTO RIVE	OH34 1	02-158	8
LITTLE SCIOTO RIVER (ROCKY FORK TO OHIO RIVER	OH33 3	09-300	43
LITTLE SUGAR CREEK	OH13 22	17-418	76
LITTLE TWIN CREEK	OH59 2	14-501	65
LITTLE WALNUT CREEK	OH40 5	02-079	6
LITTLE YANKEE RUN	OH 3 1	18-504	89
LITTLE YELLOW CREEK	OH74 13	04-021	19
LOBDELL CREEK	OH22 48	17-223	73
LOG POND RUN	OH22 24	17-251	74
LONG PRAIRIE CREEK	OH69 27	04-153	24
LONG RUN	OH 7 31	06-112	34
LONG RUN	OH 7 38	06-125	35
LONG RUN	OH22 15	17-215	73
LONG RUN	OH38 39	02-103	7
LORAMIE CREEK (TURTLE CREEK TO GREAT MIAMI R)	OH56 20	14-600	66
LOST CREEK	OH56 8	14-048	59
LOST CREEK	OH68 18	04-214	26
LOST CREEK	OH73 8	04-031	19
LOST RUN	OH22 11	17-211	72
LOUISE TRIBUTARY	OH48 16	10-215	47
LUDLOW CREEK	OH50 11	11-037	50
LUDLOW CREEK	OH57 7	14-210	63
LYTLE CREEK	OH52 14	11-212	52
MACOCHEE CREEK	OH58 50	14-138	62
MACOCHEE CREEK	OH58 52	14-139	62
MAD RIVER (BUCK CREEK TO DONNELS CREEK)	OH58 11	14-100	61
MAD RIVER (CHAPMAN CREEK TO BUCK CREEK)	OH58 21	14-100	61
MAD RIVER (DONNELS CREEK TO MUD RUN)	OH58 4	14-100	61
MAD RIVER (HEADWATERS TO MACOCHEE CREEK)	OH58 51	14-100	61
MAD RIVER (KINGS CREEK TO NETTLE CREEK)	OH58 43	14-100	61
MAD RIVER (MACOCHEE CREEK TO KINGS CREEK)	OH58 48	14-100	61
MAD RIVER (MUD RUN TO GREAT MIAMI RIVER)	OH58 1	14-100	61
MAD RIVER (NETTLE CREEK TO CHAPMAN CREEK)	OH58 29	14-100	61
MAHONING RIVER (HEADWATERS TO BEECH CREEK)	OH 1 30	18-001	87
MAHONING RIVER (MEANDER CREEK TO DUCK CREEK)	OH 2 35	18-001	87
MAHONING RIVER (MILL CREEK TO MEANDER CREEK)	OH 2 20	18-001	87
MAHONING RIVER (PA. TO YELLOW CREEK)	OH 2 1	18-001	87
MAHONING RIVER (YELLOW CREEK TO MILL CREEK)	OH 2 7	18-001	87
MARSH RUN	OH16 31	17-742	84
MARTINS CREEK	OH19 26	17-172	71
MASSIES CREEK	OH50 12	11-400	53
MAUMEE RIVER (AUGLAIZE RIVER TO WADE CREEK)	OH73 26	04-001	18
MAUMEE RIVER (BAD CREEK TO BEAVER CREEK)	OH74 16	04-023	19
MAUMEE RIVER (BEAVER CREEK TO TONTOGANY CREEK	OH74 3	04-001	18
MAUMEE RIVER (GORDON CREEK TO TIFFIN RIVER)	OH65 1	04-001	17
MAUMEE RIVER (OH./IND. BORDER TO ZUBER CUTOFF	OH65 17	04-001	18
MAUMEE RIVER (TIFFIN RIVER TO AUGLAIZE RIVER)	OH71 29	04-001	18

Waterbody Name	WBID	River Code	Page
MAUMEE RIVER (TONTOGANY CREEK TO WATERVILLE)	OH74 1	04-001	18
MAUMEE RIVER (VAN HYNING CR. TO N. TURKEYFOOT	OH73 18	04-001	18
MAUMEE RIVER (WADE CREEK TO VAN HYNING CREEK)	OH73 21	04-001	18
MAUMEE RIVER (WATERVILLE TO LAKE ERIE)	OH75 1	04-001	18
MAUMEE RIVER (ZUBER CUTOFF DITCH TO GORDON CR	OH65 10	04-001	18
MAYOR PAINTER DITCH	OH35 23	02-229	11
MCBRIDE DITCH	OH68 11.1	04-228	26
MCDOUGALL BRANCH	OH27 28	01-170	2
MCDOWELL DITCH	OH11 8.1	17-479	77
MCGUIRE CREEK	OH12 16	17-106	69
MCINTYRE CREEK	OH 5 3	06-210	36
MCKEE CREEK	OH55 16	14-075	60
MCLUNEY CREEK	OH23 45	17-323	75
MCMAHON CREEK (HEADWATERS TO WILLIAMS CREEK)	OH 6 10	06-500	37
MCMAHON CREEK (WILLIAMS CREEK TO OHIO RIVER)	OH 6 1	06-500	37
MEADOW RUN	OH30 16	09-524	44
MEANDER CREEK	OH 2 23	18-015	88
MELLWOOD ACRES. TRIB.	OH 5 29.1	06-084	33
MIAMI-ERIE CANAL	OH04-999	04-999	30
MIDDLE BRANCH NIMISHILLEN CREEK	OH11 10	17-462	76
MIDDLE CREEK (MADDOX/TOWN CR. TO L. AUGLAIZE	OH69 11	04-139	23
MIDDLE FK. SALT CREEK (HEADWATERS TO PIGEON)	OH44 8	02-611	15
MIDDLE FORK (EAST BRANCH TO MIDDLE RUN)	OH 4 22	08-200	42
MIDDLE FORK (HEADWATERS TO EAST BRANCH)	OH 4 24	08-200	42
MIDDLE FORK (MIDDLE RUN TO WEST FORK)	OH 4 17	08-200	41
MIDDLE FORK DUCK CREEK	OH 9 11	06-322	36
MIDDLE FORK GORDON CREEK	OH65 9	04-055	20
MIDDLE FORK SALT CREEK (PIGEON CR. TO L. SALT	OH44 4	02-611	15
MIDDLE FORK SHORT CREEK	OH 6 73	06-617	38
MIDDLE FORK SUGAR CREEK	OH13 17	17-406	76
MIDDLE RUN	OH 4 21	08-204	42
MIKES RUN	OH 7 35	06-116	35
MILL BRANCH	OH56 37	14-058	59
MILL CREEK	OH 2 12	18-020	88
MILL CREEK	OH46 42	02-728	16
MILL CREEK	OH65 9.1	04-075	20
MILL CREEK	OH89 7	19-006	91
MILL CREEK (ASKUE RUN TO GRAND RIVER)	OH92 23	03-120	17
MILL CREEK (HEADWATERS TO OTTER RUN)	OH35 9	02-109	7
MILL CREEK (HEADWATERS TO SHARON CREEK)	OH62 30	23-001	95
MILL CREEK (OTTER RUN TO SCIOTO RIVER)	OH35 1	02-109	7
MILL CREEK (SHARON CREEK TO WEST FORK MILL CR	OH62 27	23-001	95
MILL CREEK (WEST FORK MILL CREEK TO OHIO RIVE	OH62 23	23-001	95
MILL FORK	OH20 4	17-962	87
MILL RUN	OH50 3	11-031	49
MILLER CREEK	OH21 70	17-879	86
MILLERS RUN	OH 7 43	06-121	35
MILLS CREEK	OH83 3	05-051	31
MOBERLY BRANCH CLEAR CREEK	OH43 49.3	02-585	14
MOHICAN RIVER (ROCKY FORK TO UNNAMED TRIB.)	OH17 4	17-700	82
MONDAY CREEK	OH26 25	01-300	2
MONTVILLE LANDFILL TRIBUTARY	OH87 18	13-210	56
MOORE RUN	OH 7 20	06-102	34
MOORE RUN	OH58 24	14-117	62
MOOTS RUN	OH22 49	17-224	73
MORGAN FORK	OH45 11	02-809	16
MOSQUITO CREEK	OH 2 27	18-030	89
MOSQUITO CREEK	OH 2 31	18-030	89
MOXAHALA CREEK (HEADWATERS TO JONATHAN CREEK)	OH23 36	17-300	75
MUCHINIPPI CREEK	OH55 27	14-700	66
MUD BROOK	OH89 29	19-024	91
MUD CREEK	OH72 6	04-605	29
MUD RUN	OH 3 3.1	18-528	90
MUD RUN	OH10 33.3	17-546	80
MUD RUN	OH21 39	17-841	86
MUDDY CREEK	OH54 23	11-020	49
MUDDY CREEK	OH58 45	14-129	62
MUDDY CREEK (GRIES DITCH TO SANDUSKY BAY)	OH82 21	05-219	32
MUDDY CREEK (HEADWATERS TO GRIES DITCH)	OH82 23	05-219	32
MUDDY FORK MOHICAN RIVER	OH17 10	17-714	82
MUDDY PRAIRIE CREEK	OH25 9	01-450	3
MUDDY PRAIRIE RUN	OH25 7	01-420	2
MULGA RUN	OH30 15	09-523	44
MUSKINGUM RIVER (BIG RUN TO OHIO RIVER)	OH24 1	17-001	69
MUSKINGUM RIVER (LICKING RIVER TO SALT CREEK)	OH23 15	17-001	68
MUSKINGUM RIVER (MEIGS CREEK TO BIG RUN)	OH24 17	17-001	68
MUSKINGUM RIVER (MILLERS RUN TO MEIGS CREEK)	OH24 92	17-001	68
MUSKINGUM RIVER (SALT CREEK TO MILLER RUN)	OH24106	17-001	68
MUSKINGUM RIVER (SYMMES CREEK TO LICKING R.)	OH23 48	17-001	68
MUSKINGUM RIVER (TUSC/WALHOND. R. TO WILLS C)	OH20 22	17-001	69
MUSKINGUM RIVER (WILLS CREEK TO SYMMES CREEK)	OH20 1	17-001	69
MYERSVILLE TRIBUTARY	OH10 33.2	17-545	80

Waterbody Name	WBID	River Code	Page
N. FK. GREAT MIAMI RIVER	OH55 43	14-802	66
NANCY RUN	OH 5 48	06-915	40
NARROWS RUN	OH 8 89	06-022	33
NAYLOR DITCH (SEBRING)	OH 1 30.1	18-066	89
NETTLE CREEK	OH58 36	14-130	62
NETTLE CREEK (HEADWATERS TO ST. JOSEPH RIVER)	OH65 36	04-413	27
NEW RICHLAND TRIBUTARY	OH55 37	14-806	66
NEWELL RUN	OH17 19	17-723	83
NEWMAN CREEK	OH10 7	17-534	79
NEWMAN RUN	OH50 2	11-030	49
NIMISHILLEN CREEK (W. BRANCH TO SANDY CREEK)	OH11 5	17-460	76
NINEMILE CREEK	OH56 27	14-606	66
NO NAME CREEK	OH87 24.1	20-026	94
NORTH BRANCH	OH60 17	14-019	58
NORTH BRANCH CROSS CREEK	OH 5 20	06-208	35
NORTH BRANCH KOKOSING RIVER	OH18 27	17-674	82
NORTH BRANCH PORTAGE RIVER	OH77 10	16-007	67
NORTH BRANCH ROCKY RIVER	OH87 19	13-205	56
NORTH CROOKED CREEK	OH21 35	17-834	85
NORTH FORK (BULL CREEK TO L. BEAVER CREEK)	OH 4 3	08-100	41
NORTH FORK (PA. TO BULL CREEK)	OH 4 10	08-100	41
NORTH FORK (SYCAMORE CR. TO S. FK. LICKING R)	OH22 23	17-250	74
NORTH FORK CAPTINA CREEK	OH 7 36	06-123	35
NORTH FORK DEER CREEK	OH41 32	02-319	12
NORTH FORK LICKING R (HEADWATERS TO SYCAMORE)	OH22 37	17-250	74
NORTH FORK LITTLE MIAMI RIVER	OH50 21	11-041	50
NORTH FORK PAINT CREEK (COMPTON CR. TO LITTLE	OH43 8	02-510	14
NORTH FORK PAINT CREEK (LITTLE CREEK TO PAINT	OH43 2	02-510	14
NORTH FORK STILLWATER RIVER	OH57 46	14-238	64
NORTH FORK WHITEOAK CREEK	OH49 69	10-430	48
NORTH FORK WILLS CREEK	OH 5 27	06-069	33
NORTH FORK YELLOW CREEK	OH 5 43	06-910	39
NORTH POWELL CREEK	OH71 4	04-112	22
NORTH ROCKSWALE DITCH	OH34 1.3	02-237	11
NORTH ROYALTON "A" TRIB.	OH87 7	13-103	55
NORTH TURKEYFOOT CREEK	OH73 16	04-037	19
NORWALK CREEK	OH84 5	12-103	54
O'BANNON CREEK	OH54 12	11-010	49
OAK RUN	OH41 28	02-316	12
OGG CREEK	OH23 43.1	17-325	75
OHIO BRUSH CREEK (BAKER FORK TO WEST FORK)	OH48 31	10-200	47
OHIO BRUSH CREEK (HEADWATERS TO BAKER FORK)	OH48 44	10-200	47
OHIO BRUSH CREEK (SEMPLE CREEK TO OHIO RIVER)	OH48 1	10-200	47
OHIO BRUSH CREEK (WEST FORK TO SEMPLE CREEK)	OH48 11	10-200	46
OHIO CANAL	OH88 1.2	19-049	93
OIL DITCH	OH66 4	04-224	26
OLDTOWN CREEK	OH15 28	17-524	79
OLDTOWN CREEK	OH26 42	01-036	1
OLDTOWN CREEK	OH50 13	11-401	53
OLDTOWN RUN	OH17 16	17-720	82
OLENTANGY RIVER (BARTHOLOMEW RUN TO SCIOTO R)	OH37 9	02-400	13
OLENTANGY RIVER (DELAWARE RUN TO BARTHOLOMEW)	OH37 13	02-400	13
OLENTANGY RIVER (HEADWATERS TO MUD RUN)	OH36 35	02-400	13
OLENTANGY RIVER (WHETSTONE CREEK TO DELAWARE)	OH36 1	02-400	13
OLIVE GREEN CREEK	OH24 61	17-070	69
OPOSSUM CREEK	OH60 34	14-035	59
OPOSSUM RUN	OH55 19	14-085	60
OPOSSUM RUN (PAULDING)	OH71 15.1	04-076	20
OSNABURG DITCH	OH11 7.2	17-478	77
OTTAWA CREEK	OH66 1	04-183	25
OTTAWA RIVER (HOG CREEK TO LITTLE OTTAWA RIVE	OH68 17	04-200	25
OTTAWA RIVER (HONEY RUN TO SUGAR CREEK)	OH68 8	04-200	25
OTTAWA RIVER (LITTLE OTTAWA RIVER TO HONEY RU	OH68 11	04-200	25
OTTAWA RIVER (SUGAR CREEK TO AUGLAIZE RIVER)	OH68 1	04-200	25
OTTAWA RIVER (TENMILE CREEK TO LAKE ERIE)	OH75 16	04-300	27
OTTER CREEK	OH76 24	16-200	68
OTTER FORK	OH22 41	17-267	74
OWL CREEK	OH60 33.1	14-089	60
OWL CREEK	OH62 16	14-007	58
OWL CREEK	OH72 19	04-615	29
PACKER CREEK	OH76 3	16-216	68
PACKSADDLE RUN	OH 7 27	06-109	34
PADDY'S RUN	OH62 14	14-005	58
PAINT CREEK	OH19 27	17-173	71
PAINT CREEK	OH29 7	09-038	43
PAINT CREEK (E. FK. PAINT CREEK TO SUGAR CREE	OH42 31	02-500	13
PAINT CREEK (JEFFERSONVILLE TO E. FK. PAINT C	OH42 35	02-500	13
PAINT CREEK (LOWER TWIN CR. TO N. FK. PAINT C	OH43 20	02-500	13
PAINT CREEK (N. FK. PAINT CREEK TO SCIOTO RIV	OH43 1	02-500	13
PAINT CREEK (ROCKY FORK TO LOWER TWIN CREEK)	OH43 27	02-500	13
PAINT CREEK (SUGAR CREEK TO UPPER PAINT CREEK	OH42 24	02-500	13
PAINT CREEK (UPPER RESERVOIR TO ROCKY FORK)	OH42 1	02-500	13

Waterbody Name	WBID	River Code	Page
PAINTER CREEK	OH33 74	09-422	44
PAINTER CREEK	OH57 18	14-208	63
PAINTER RUN	OH22 14	17-214	72
PANCAKE CREEK	OH10 27	17-539	79
PARAMOUR CREEK	OH80 22	05-042	31
PAWPAW CREEK	OH40 19	02-087	6
PEAVINE CREEK	OH 7 21	06-103	34
PEEPEE CREEK	OH45 34	02-035	6
PET RUN	OH22 51	17-226	73
PETERS CREEK	OH21 33	17-832	85
PETERS CREEK	OH56 10.2	14-096	61
PHELPS RUN	OH35 7	02-132	8
PICKEREL CREEK	OH83 7	05-046	31
PIGEON CREEK	OH10 31	17-543	79
PIGEON CREEK (HEADWATERS TO MIDDLE FORK)	OH44 5	02-612	15
PINE CREEK (HALES CREEK TO LITTLE PINE CREEK)	OH33 61	09-400	43
PINE CREEK (LITTLE PINE CREEK TO OHIO RIVER)	OH33 49	09-400	43
PINEY FORK	OH 7 6	06-704	38
PIPE CREEK	OH 7 47	06-047	33
PIPE CREEK	OH83 1	05-052	31
PLEASANT RUN	OH39 30	02-221	10
PLEASANT RUN	OH60 5	14-013	58
PLEASANTVILLE-THURSTON WWTP TRIB.	OH40 22	02-225	10
PLUM CREEK	OH68 2	04-201	25
PLUM CREEK	OH86 14	20-021	93
PLUM CREEK	OH87 11	13-201	56
PLUM CREEK	OH87 20	13-206	56
POND BROOK	OH89 10	19-008	91
PONE RUN	OH15 26	17-522	79
PORTAGE RIVER (NORTH BRANCH TO SUGAR CREEK)	OH78 9	16-001	67
PORTAGE RIVER (SUGAR CREEK TO LAKE ERIE)	OH78 3	16-001	67
POTATO RUN	OH66 19	04-196	25
POTTER CREEK	OH88 10	19-029	92
POWDERLICK RUN	OH35 19	02-144	8
POWELL CREEK	OH71 2	04-110	22
POWERS BROOK	OH89 30	19-025	91
PPG TRIB. TO PARAMOUR CREEK	OH80 22.1	05-059	32
PRAIRIE CREEK	OH72 11	04-633	29
PRAIRIE CREEK (HAGERMAN CR. TO LITTLE AUGLAIZ	OH69 2	04-131	23
PRAIRIE CREEK (HEADWATERS TO HAGERMAN CREEK)	OH69 9	04-131	23
PRAIRIE RUN	OH38 29	02-125	7
PUNCHEON FORK	OH30 39	09-534	45
PUSHETA CREEK	OH70 18	04-235	26
PYMATUNING CREEK (HEADWATERS TO SHENANGO RES)	OH 3 10	18-550	90
RACCOON CREEK	OH22 46	17-221	73
RACCOON CREEK	OH83 11	05-045	31
RACCOON CREEK (HEADWATERS TO BRUSHY FORK)	OH30 60	09-500	44
RACCOON CREEK (HEWETT FORK TO ELK FORK)	OH30 41	09-500	44
RACCOON CREEK (LITTLE RACCOON CREEK TO RYAN R	OH31 49	09-500	44
RACCOON RUN	OH25 15	01-530	3
RAMP CREEK	OH22 57	17-232	73
RANDOLPH RUN	OH 5 47	06-914	39
RANNELLS CREEK	OH21 72	17-881	86
RATTLESNAKE CREEK	OH84 3	12-102	54
RATTLESNAKE CREEK (WEST BRANCH TO LEES CREEK)	OH42 15	02-550	14
RED RUN	OH 2 37	18-028	88
RED RUN	OH10 14	17-551	80
REIGLE DITCH	OH59 2.1	14-516	65
RICH FORK	OH 8 58	06-451	37
RILEY CREEK (HEADWATERS TO LITTLE RILEY CREEK	OH67 12	04-168	24
RILEY CREEK (LITTLE RILEY CREEK TO BLANCHARD	OH67 10	04-168	24
RIVER STYX	OH10 16	17-553	80
ROBINSON RUN	OH39 24	02-207	10
ROCK CREEK	OH81 6	05-014	31
ROCK CREEK (LEBANON CREEK TO GRAND RIVER)	OH91 1	03-130	17
ROCKSWALE DITCH	OH34 1.1	02-236	11
ROCKY FORD	OH77 4	16-103	67
ROCKY FORK	OH 7 22	06-104	34
ROCKY FORK	OH22 10	17-210	72
ROCKY FORK (HEADWATERS TO ROCKY FORK LAKE)	OH43 51	02-530	14
ROCKY FORK (ROCKY FORK LAKE TO PAINT CREEK)	OH43 38	02-530	14
ROCKY FORK MOHICAN RIVER	OH16 19	17-733	83
ROCKY RIVER	OH87 2	13-001	55
ROWLEY RUN	OH 4 34.3	08-309	42
RUSH CREEK	OH25 20	01-500	3
RUSH CREEK	OH34 8	02-165	8
RUSH CREEK (LITTLE RUSH CREEK TO HOCKING R.)	OH25 12	01-500	3
S. FK. GREAT MIAMI R. (HEADWATERS TO INDIAN L	OH55 36	14-800	66
S. FK. LICKING R(TRIB@ 23.25 TO WASTEWEIR RN)	OH22 59	17-220	73
S. FK. LICKING R. (BUCKEYE LK OUT TO LICKING)	OH22 45	17-220	73
S. FK. LICKING R. (HEADWATERS TO TRIB. @ 23.2	OH22 61	17-220	73
SALISBURY RUN	OH 5 46	06-913	39

Waterbody Name	WBID	River Code	Page
SALLY BUFFALO CREEK	OH 6 73.1	06-619	38
SALT CREEK	OH19 29	17-175	71
SALT CREEK	OH23 1	17-940	87
SALT CREEK (LAUREL RUN TO QUEER CREEK)	OH44 33	02-600	15
SALT CREEK (PIKE RUN TO LITTLE SALT CREEK)	OH44 19	02-600	15
SAND RUN	OH30 18	09-525	44
SANDUSKY RIVER (BELLS RUN TO WOLF CREEK)	OH81 1	05-001	30
SANDUSKY RIVER (BROKEN SWORD CREEK TO ROCK RU	OH80 9	05-001	30
SANDUSKY RIVER (HEADWATERS TO UNNAMED TRIB.)	OH80 20	05-001	30
SANDUSKY RIVER (ROCK RUN TO TYMOCHTEE CREEK)	OH80 1	05-001	30
SANDUSKY RIVER (SYCAMORE CREEK TO BELLS RUN)	OH81 23	05-001	30
SANDUSKY RIVER (UNNAMED TRIB. TO BROKEN SWORD	OH80 17	05-001	30
SANDUSKY RIVER (WOLF CREEK TO LAKE ERIE)	OH82 1	05-001	30
SANDY CREEK (L. SANDY CR. TO NIMISHILLEN CR.)	OH11 12	17-450	76
SANDY CREEK (NIMISHILLEN CR. TO TUSCARAWAS R)	OH11 1	17-450	76
SANDY RUN	OH30 56	09-568	45
SAW MILL RUN	OH 2 18	18-026	88
SCHENCK CREEK	OH18 14	17-662	82
SCIOTO BIG RUN	OH37 4	02-092	6
SCIOTO BRUSH CREEK (MCCULLOUGH CREEK TO SCIOT	OH46 7	02-700	15
SCIOTO BRUSH CREEK (RARDEN CREEK TO SOUTH FOR	OH46 63	02-700	16
SCIOTO RIVER (BIG DARBY CREEK TO SCIPPO CR.)	OH41 33	02-001	5
SCIOTO RIVER (BIG WALNUT CREEK TO WALNUT CR.)	OH40 23	02-001	5
SCIOTO RIVER (BOKES CREEK TO MILL CREEK)	OH35 12	02-001	4
SCIOTO RIVER (FULTON CREEK TO BOKES CREEK)	OH35 24	02-001	4
SCIOTO RIVER (HEADWATERS TO SILVER CREEK)	OH34 24	02-001	4
SCIOTO RIVER (INDIAN RUN TO OLENTANGY RIVER)	OH37 19	02-001	4
SCIOTO RIVER (KINNIKINNICK CREEK TO PAINT CR)	OH41 1	02-001	5
SCIOTO RIVER (LITTLE SCIOTO R. TO FULTON CR.)	OH35 27	02-001	4
SCIOTO RIVER (MILL CREEK TO INDIAN RUN)	OH37 25	02-001	4
SCIOTO RIVER (OLENTANGY R. TO SCIOTO BIG RUN)	OH37 6	02-001	5
SCIOTO RIVER (PAINT CREEK TO SALT CREEK)	OH45 56	02-001	5
SCIOTO RIVER (PANTHER CREEK TO RUSH CREEK)	OH34 13	02-001	4
SCIOTO RIVER (PEEPEE CREEK TO SUNFISH CREEK)	OH45 29	02-001	4
SCIOTO RIVER (RUSH CREEK TO LITTLE SCIOTO RIV	OH34 5	02-001	4
SCIOTO RIVER (SALT CREEK TO PEEPEE CREEK)	OH45 44	02-001	5
SCIOTO RIVER (SCIOTO BIG RUN TO BIG WALNUT C)	OH37 1	02-001	5
SCIOTO RIVER (SCIOTO BRUSH CREEK TO OHIO RIVE	OH46 1	02-001	5
SCIOTO RIVER (SCIPPO CR. TO KINNIKINNICK CR.)	OH41 6	02-001	5
SCIOTO RIVER (SILVER CREEK TO PANTHER CREEK)	OH34 17	02-001	4
SCIOTO RIVER (SUNFISH CREEK TO SCIOTO BRUSH C	OH46 84	02-001	5
SCIOTO RIVER (WALNUT CREEK TO BIG DARBY CR.)	OH40 1	02-001	5
SCIPPO CREEK	OH41 34	02-069	6
SCOTT CREEK	OH26 43	01-037	1
SCOTT RUN	OH17 18	17-722	83
SECOND CREEK	OH52 4	11-203	52
SENECA FORK	OH21 46	17-850	86
SEVENMILE CREEK (PAINT CREEK TO FOURMILE CR.)	OH61 12	14-410	65
SHADE RIVER (MIDDLE BR. SHADE R. TO OHIO R.)	OH28 30	09-600	46
SHAKER CREEK	OH60 15	14-020	59
SHALLOW RUN	OH66 23	04-248	27
SHARON CREEK	OH62 28	23-005	95
SHARPS FORK	OH27 24	01-160	2
SHAW CREEK	OH36 11	02-453	13
SHAWNEE CREEK	OH50 10.1	11-045	50
SHAYLER RUN	OH53 6	11-105	51
SHERMAN RUN	OH10 1.1	17-568	81
SHEROD CREEK	OH85 19	12-010	54
SHERRICK RUN	OH11 7	17-461	76
SHIMER RUN	OH48 32	10-248	48
SHOCALOG RUN	OH10 32	17-544	79
SHORT CREEK (NORTH FORK TO PINEY FORK)	OH 6 57	06-600	38
SHORT CREEK (PINEY FORK TO OHIO RIVER)	OH 6 50	06-600	38
SHREVE CREEK	OH19 35	17-180	71
SHRIMPLIN RUN	OH19 15	17-162	71
SILVER CREEK	OH 1 10	18-046	89
SILVER CREEK	OH10 13.1	17-562	80
SILVER CREEK	OH34 26	02-182	8
SIMPSON CREEK	OH54 20	11-017	49
SIMPSON RUN	OH22 50	17-225	73
SIXMILE CREEK	OH70 14	04-128	23
SKELLINGER CREEK	OH85 11	21-008	94
SLOW DITCH (LIGGITT DITCH)	OH55 38	14-801	66
SNOW FORK	OH26 26	01-310	2
SNYDERS DITCH	OH83 3.4	05-057	31
SOLOMON RUN	OH53 53	11-147	51
SOMERSET CREEK	OH25 21.1	01-551	3
SOUTH BRANCH (HEADWATERS TO E. BR. PORTAGE R)	OH77 9	16-100	67
SOUTH BRANCH WOLF CREEK	OH24 27	17-035	69
SOUTH FORK	OH46 23	02-710	16
SOUTH FORK CAPTINA CREEK	OH 7 39	06-117	35
SOUTH FORK EAGLE CREEK	OH 1 6	18-043	89

Waterbody Name	WBID	River Code	Page
SOUTH POWELL CREEK	OH71 6	04-114	22
SOUTHWEST BRANCH	OH85 14	21-005	94
SPAIN CREEK	OH39 31.1	02-222	10
SPOON RIVER	OH48 19	10-221	47
SPRING CREEK	OH56 11	14-050	59
SPRING CREEK	OH72 35	04-630	29
SPRING RUN	OH19 36.1	17-198	72
SPRINGFIELD LAKE OUTLET	OH88 2	19-031	92
SQUAW CREEK	OH 2 22	18-014	88
ST. JOSEPH RIVER (FISH CREEK TO OH/IND. BORDE	OH65 21	04-400	27
ST. JOSEPH RIVER (HEADWATERS TO NETTLE CREEK)	OH65 37	04-400	27
ST. MARYS RIVER (GRAND LAKE TO ST. MARYS)	OH64 25	04-500	28
ST. MARYS RIVER (MIAMI/ERIE CANAL TO SIXMILE	OH64 18	04-500	28
ST. MARYS RIVER (TWELVEMILE CREEK TO BLACK CR	OH64 7	04-500	28
ST. PARIS TRIBUTARY	OH58 42	14-140	62
STALL RUN	OH41 10	02-303	12
STANDINGSTONE RUN	OH 7 8	06-706	38
STEEL RUN	OH16 14	17-762	84
STEELE DITCH	OH10 13.3	17-566	81
STEEP RUN	OH 6 29	06-805	39
STILL FORK SANDY CREEK	OH11 21	17-470	77
STILLWATER CREEK (BOGGS FORK TO BRUSHY FORK)	OH14 28	17-350	75
STILLWATER CREEK (BRUSHY CR. TO TUSCARAWAS R)	OH14 1	17-350	75
STILLWATER RIVER (BRUSH CREEK TO GREAT MIAMI	OH57 1	14-200	63
STILLWATER RIVER (GREENVILLE CR. TO LUDLOW CR	OH57 14	14-200	63
STILLWATER RIVER (HEADWATERS TO NORTH FORK)	OH57 45	14-200	63
STILLWATER RIVER (LUDLOW CREEK TO BRUSH CREEK	OH57 5	14-200	63
STILLWATER RIVER (NORTH FORK TO SWAMP CREEK)	OH57 43	14-200	63
STILLWATER RIVER (SWAMP CREEK TO GREENVILLE C	OH57 37	14-200	63
STINGY RUN	OH29 22	09-060	43
STONE MILL RUN	OH 4 23	08-205	42
STONELICK CREEK (HEADWATERS TO E. FK. L. MIAM	OH53 8	11-107	51
STONY CREEK (HEADWATERS TO LEE/GRAVE CREEK)	OH55 15	14-072	60
STRAIGHT FORK	OH 8 38	06-428	37
STRAWCAMP RUN	OH 5 72	06-932	40
STREETSBORO TRIB. TO TINKERS CREEK	OH89 9.1	19-047	92
STRONGSVILLE "A" TRIB.	OH87 13	13-209	56
SUGAR CREEK	OH68 4	04-203	25
SUGAR CREEK	OH81 2	05-010	30
SUGAR CREEK	OH85 21	12-008	54
SUGAR CREEK (HEADWATERS TO M. FK. SUGAR CR.)	OH13 20	17-400	76
SUGAR CREEK (HEADWATERS TO PAINT CREEK)	OH42 30	02-579	14
SUGAR CREEK (MIDDLE FORK TO SOUTH FORK)	OH13 14	17-400	76
SUGAR CREEK (S. FK. SUGAR CR TO TUSCARAWAS R)	OH13 1	17-400	76
SUGAR RUN	OH30 17.1	09-582	45
SUGAR RUN	OH39 23	02-206	10
SUGARCAMP RUN	OH53 5	11-104	51
SULPHUR RUN	OH27 24.1	01-134	1
SUNDAY CREEK (W. BR. SUNDAY CR. TO HOCKING R)	OH26 8	01-200	2
SUNFISH CREEK (CHENOWETH FORK TO SCIOTO RIVER	OH45 1	02-800	16
SUNFISH CREEK (HEADWATERS TO MORGAN FORK)	OH45 14	02-800	16
SUNFISH CREEK (HEADWATERS TO PINEY FORK)	OH 7 5	06-700	38
SUNFISH CREEK (PINEY FORK TO OHIO RIVER)	OH 7 1	06-700	38
SWAMP CREEK	OH57 41	14-235	64
SWAN CREEK (AI CREEK TO BLUE CREEK)	OH75 9	04-003	18
SWAN CREEK (BLUE CREEK TO MAUMEE RIVER)	OH75 3	04-003	18
SWARTZ DITCH	OH11 10.1	17-484	77
SYCAMORE CREEK	OH40 15	02-085	6
SYCAMORE CREEK	OH54 9	11-007	49
SYCAMORE DITCH	OH57 18.1	14-241	64
SYMMES CREEK (VENISONHAM CREEK TO OHIO RIVER)	OH32 1	09-700	46
TAWAWA CREEK	OH56 39	14-060	60
TAYLOR CREEK	OH34 25	02-181	8
TAYLOR CREEK	OH62 12	14-004	58
TENMILE CREEK	OH49 4	10-003	46
TENMILE CREEK (HEADWATERS TO OTTAWA RIVER)	OH75 18	04-320	27
THE OUTLET (UPSTREAM)	OH66 22	04-198	25
TIDERISHI CREEK	OH66 2	04-184	25
TIFFIN RIVER (LEATHERWOOD CREEK TO LICK CREEK	OH72 16	04-600	28
TIFFIN RIVER (LICK CREEK TO MAUMEE RIVER)	OH72 1	04-600	28
TINKERS CREEK (HEADWATERS TO POND BROOK)	OH89 9	19-007	91
TINKERS CREEK (POND BROOK TO CUYAHOGA RIVER)	OH89 8	19-007	91
TODD FORK (DUTCH CREEK TO LITTLE EAST FORK)	OH52 8	11-200	52
TODD FORK (HEADWATERS TO DUTCH CREEK)	OH52 17	11-200	52
TODD FORK (LITTLE EAST FORK TO FIRST CREEK)	OH52 3	11-200	52
TONTOGANY CREEK	OH74 2	04-013	19
TOUBY RUN	OH16 20	17-734	83
TOUSSAINT CREEK	OH76 4	16-215	68
TOUSSAINT CREEK (HEADWATERS TO TRIB. E. OF GE	OH76 5	16-215	68
TOWN CREEK	OH69 15	04-143	23
TOWN FORK	OH 8 59	06-450	37
TOWN RUN	OH 6 30	06-806	39

Waterbody Name	WBID	River Code	Page
TOWN RUN	OH17 23	17-727	83
TOWN RUN	OH35 1.1	02-239	11
TRAIL RUN	OH 5 74	06-934	40
TREBER RUN	OH48 14	10-212	47
TRIB. TO AUGLAIZE R. (RM 19.2)	OH70 1.1	04-078	20
TRIB. TO BAD CREEK (RM 14.4)	OH73 1.1	04-092	21
TRIB. TO BALDWIN CREEK (RM 6.0)	OH87 5.1	13-108	55
TRIB. TO BEAR CREEK (RM 12.3)	OH75 22.1	04-093	21
TRIB. TO BEAVER CREEK (RM 14.2)	OH72 21.1	04-637	29
TRIB. TO BLACK FORK (RM 45.9)	OH16 28.2	17-764	84
TRIB. TO BLACK FORK (RM 54.4)	OH16 28.3	17-748	84
TRIB. TO BLACK FORK (RM 57.1)	OH16 28.4	17-747	84
TRIB. TO BLACK FORK (RM 58.8)	OH16 28.5	17-763	84
TRIB. TO BLANCHARD RIVER (RM 21.5)	OH67 6.1	04-250	27
TRIB. TO BROKEN SWORD CREEK (NEVADA)	OH80 13.1	05-060	32
TRIB. TO BROKENKNIFE CREEK (NEW WASH.)	OH81 22.1	05-210	32
TRIB. TO BUFFALO FORK	OH21 6.1	17-894	87
TRIB. TO CENTER BRANCH (RM 2.3)	OH25 21.2	01-555	4
TRIB. TO CHIPPEWA CREEK (RM 14.5)	OH10 21.1	17-565	81
TRIB. TO CLEAR CREEK (RM 7.1)	OH60 22.1	14-094	60
TRIB. TO CLEAR CREEK (RM 8.5)	OH43 49.4	02-589	15
TRIB. TO DEER CREEK (RM 5.9)	OH72 33.1	04-635	29
TRIB. TO E. BR. RACCOON CREEK (RM 5.6)	OH30 63.1	09-587	46
TRIB. TO E. BR. ROCKY R. (MEDINA #9)	OH87 8.1	13-105	55
TRIB. TO E. BR. ROCKY RIVER (RM 29.1)	OH87 8.2	13-107	55
TRIB. TO E. BR. VERMILION R. (RM 8.2)	OH85 10.1	21-009	94
TRIB. TO E. FK. L. MIAMI RIVER (RM 4.8)	OH53 1.1	11-159	52
TRIB. TO E. FK. L. MIAMI RIVER (RM 75.5)	OH53 60.1	11-155	51
TRIB. TO E. FK. L. MIAMI RIVER (RM 78.4)	OH53 60.2	11-156	51
TRIB. TO E. FK. L. MIAMI RIVER (RM 82.3)	OH53 60.3	11-157	51
TRIB. TO E. FK. L. MIAMI RIVER (RM 83.9)	OH53 60.4	11-158	52
TRIB. TO EAST BRANCH NIMISHILLEN CREEK	OH11 11.3	17-483	77
TRIB. TO EUCLID CREEK	OH90 16.1	19-	90
TRIB. TO FULTON CREEK	OH35 25.1	02-233	11
TRIB. TO GEORGES CREEK	OH40 12.1	02-231	11
TRIB. TO GRANGER DITCH (MEDINA #11)	OH87 21.1	13-211	56
TRIB. TO GREAT MIAMI R. (RM 157.3)	OH55 34.1	14-092	60
TRIB. TO GREAT MIAMI RIVER (103.9)	OH56 10.1	14-097	61
TRIB. TO GREAT MIAMI RIVER (96.4)	OH56 1.1	14-093	60
TRIB. TO HARRISON LAKE	OH72 29.1	04-638	30
TRIB. TO INDIAN CREEK (QUEEN ACRES)	OH60 2.1	14-090	60
TRIB. TO JAMISON CREEK	OH17 22.1	17-743	84
TRIB. TO KILLBUCK CREEK (RM 46.0)	OH19 31.4	17-195	72
TRIB. TO KILLBUCK CREEK (RM 47.1)	OH19 31.5	17-197	72
TRIB. TO LAKE ERIE (BEULAH BEACH)	OH85 18.2	12-012	54
TRIB. TO LAKE ERIE (BLUEBIRD BEACH)	OH85 18.1	12-011	54
TRIB. TO LAKE ERIE (HEIDELBURG BEACH)	OH85 18.3	12-013	54
TRIB. TO LEATHERWOOD CREEK (RM 20.6)	OH21 38.1	17-846	86
TRIB. TO LEATHERWOOD CREEK (RM 21.7)	OH21 38.2	17-845	86
TRIB. TO LESLIE RUN	OH 4 7.1	08-119	41
TRIB. TO LITTLE AUGLAIZE RIVER (RM 31.7)	OH69 20.2	04-227	26
TRIB. TO LITTLE BULL CREEK	OH 4 8.1	08-120	41
TRIB. TO LITTLE CHIPPEWA CREEK (RM 10.5)	OH10 19.1	17-570	81
TRIB. TO LITTLE MCMAHON CREEK (RM 2.3)	OH 6 5.1	06-519	38
TRIB. TO LITTLE SALT CREEK (RM 3.6)	OH23 11.1	17-982	87
TRIB. TO LOST CREEK	OH68 18.1	04-	17
TRIB. TO MILL FORK (RM 6.6)	OH20 4.1	17-981	87
TRIB. TO MUD RUN	OH15 23.1	17-569	81
TRIB. TO N. FK. LICKING RIVER (RM 5.0)	OH22 23.2	17-279	74
TRIB. TO NORTH FORK YELLOW CREEK	OH 5 43.2	06-941	40
TRIB. TO NORTH TURKEYFOOT CR. (RM 1.6)	OH73 16.1	04-094	21
TRIB. TO NORTH TURKEYFOOT CR. (RM 18.4)	OH73 16.3	04-083	20
TRIB. TO NORTH TURKEYFOOT CR. (RM 19.5)	OH73 16.4	04-084	21
TRIB. TO NORTH TURKEYFOOT CR. (RM 6.7)	OH73 16.2	04-082	20
TRIB. TO OLDTOWN CREEK (GENERAL ELECTRIC)	OH26 42.1	01-049	1
TRIB. TO OPOSSUM RUN (RM 1.0)	OH27 25.1	01-164	2
TRIB. TO OTTAWA RIVER (RM 41.5)	OH68 17.2	04-246	27
TRIB. TO PLUM CREEK (RM 7.3)	OH68 2.1	04-229	26
TRIB. TO POND BROOK	OH89 10.1	19-054	93
TRIB. TO PRAIRIE CREEK (RM 11.0)	OH72 11.7	04-639	30
TRIB. TO PRAIRIE CREEK (RM 11.3)	OH72 11.6	04-634	29
TRIB. TO RACCOON CREEK (RM 18.9)	OH22 46.1	17-240	74
TRIB. TO RATTLESNAKE CREEK	OH84 3.1	12-104	54
TRIB. TO RED RUN (WARREN)	OH 2 37.1	18-067	89
TRIB. TO ROCKY FORK (RM 10.7)	OH16 19.4	17-767	85
TRIB. TO ROCKY FORK (RM 11.4)	OH16 19.5	17-744	84
TRIB. TO ROCKY FORK (RM 12.0)	OH16 19.6	17-766	84
TRIB. TO ROCKY FORK (RM 14.4)	OH16 19.7	17-765	84
TRIB. TO ROCKY FORK (RM 16.4)	OH16 19.8	17-746	84
TRIB. TO ROCKY FORK (RM 7.1)	OH16 19.2	17-768	85
TRIB. TO ROCKY FORK (RM 7.7)	OH16 19.3	17-745	84
TRIB. TO S. POWELL CREEK	OH71 6.1	04-072	20

Waterbody Name	WBID	River Code	Page
TRIB. TO SILVER CREEK (MEADOWS SUBDIV.)	OH10 13.5	17-563	80
TRIB. TO SILVER CREEK (RM 4.1)	OH10 13.4	17-571	81
TRIB. TO SIXMILE CREEK (SPENCERVILLE)	OH70 14.1	04-079	20
TRIB. TO SNOW FORK (RM 6.7)	OH26 26.1	01-314	2
TRIB. TO SOMERSET CREEK (RM 1.2)	OH25 21.3	01-554	3
TRIB. TO SOMERSET CREEK (RM 1.8)	OH25 21.4	01-553	3
TRIB. TO SOMERSET CREEK (RM 2.7)	OH25 21.5	01-552	3
TRIB. TO STILLWATER RIVER (RM 11.7)	OH57 1.1	14-242	64
TRIB. TO SUGAR CREEK	OH68 4.2	04-225	26
TRIB. TO SUGAR CREEK (21.9)	OH68 4.3	04-244	27
TRIB. TO TENMILE CREEK (RM 16.9)	OH75 18.1	04-091	21
TRIB. TO TRIB. TO W. BR. ROCKY R. (RM 1.78)	OH87 10.11	13-216	56
TRIB. TO TUSCARAWAS RIVER (RM 108.9)	OH10 26.1	17-549	80
TRIB. TO TUSCARAWAS RIVER (RM 82.0)	OH10 1.2	17-564	81
TRIB. TO TUSCARAWAS RIVER (RM 89.9)	OH10 5.2	17-567	81
TRIB. TO TUSCARAWAS RIVER (UNIONTOWN)	OH10 33.4	17-547	80
TRIB. TO W. BR. ROCKY R. (RM 1.78)	OH87 10.1	13-217	56
TRIB. TO W. FK. L. BEAVER CR. (RM 13.0)	OH 4 34.2	08-310	42
TRIB. TO W. FK. OHIO BRUSH CR. (SEAMAN)	OH48 18.1	10-250	48
TRIB. TO WABASH RIVER	OH63 19.1	22-012	95
TRIB. TO WEST BRANCH HURON RIVER	OH84 20.1	12-242	55
TRIB. TO WHITE EYES CREEK (RM 2.6)	OH21 1.1	17-838	85
TRIB. TO WHITE EYES CREEK (RM 4.5)	OH21 1.2	17-839	85
TRIB. TO WILLS CREEK	OH 5 24.2	06-083	33
TROUGH RUN	OH 6 3	06-502	37
TURKEY CREEK	OH47115	10-508	48
TURKEY CREEK	OH93 2	07-200	41
TURKEY RUN	OH25 14	01-520	3
TURKEY RUN	OH25 22	01-560	4
TURKEY RUN	OH46 36	02-722	16
TURKEY RUN	OH51 5	11-304	53
TURKEYFOOT RUN	OH 4 18	08-201	42
TURTLE CREEK	OH54 24	11-021	49
TUSCARAWAS R. (CHIPPEWA CREEK TO NEWMAN CR.)	OH10 9	17-500	78
TUSCARAWAS R. (NEWMAN CREEK TO PIGEON RUN)	OH10 5	17-500	78
TUSCARAWAS R. (PIGEON RUN TO SANDY CREEK)	OH10 1	17-500	78
TUSCARAWAS RIVER (CONOTTON CREEK TO SUGAR CR)	OH15 31	17-500	78
TUSCARAWAS RIVER (DUNLOP CREEK TO EVANS CR.)	OH15 10	17-500	78
TUSCARAWAS RIVER (EVANS CR. TO WALHONDING R.)	OH15 1	17-500	78
TUSCARAWAS RIVER (HEADWATERS TO WOLF CREEK)	OH10 33	17-500	78
TUSCARAWAS RIVER (STILLWATER CR TO DUNLOP CR)	OH15 19	17-500	78
TUSCARAWAS RIVER (SUGAR CR. TO STILLWATER CR)	OH15 24	17-500	78
TUSCARAWAS RIVER (SUGAR CREEK TO NEWMAN CR.)	OH15 32	17-500	78
TUSCARAWAS RIVER (WOLF CREEK TO CHIPPEWA CR.)	OH10 26	17-500	78
TUSSING DITCH	OH40 14	02-226	11
TWELVEMILE CREEK	OH64 12	04-510	28
TWIN CREEK (BANTAS FORK TO LITTLE TWIN CREEK)	OH59 3	14-500	65
TWIN CREEK (HEADWATERS TO PRICE CREEK)	OH59 15	14-500	65
TWIN CREEK (LITTLE TWIN CREEK TO GREAT MIAMI)	OH59 1	14-500	65
TWIN CREEK (PRICE CREEK TO BANTAS FORK)	OH59 10	14-500	65
TWO MILE CREEK	OH60 7	14-015	58
TYMOCHTEE CREEK (WARPOLE CR. TO L. TYMOCHTEE	OH79 9	05-300	32
UNION OIL TRIB.	OH88 4.1	19-050	93
UNNAMED TRIB. TO LITTLE CHIPPEWA CREEK	OH10 20	17-561	80
UNNAMED TRIBUTARY (RM 5.4)	OH64 28	04-526	28
UNNAMED TRIBUTARY @ JEWETT	OH12 26	17-124	70
UNNAMED TRIBUTARY @RM 0.93	OH69 1.1	04-226	26
UNNAMED TRIBUTARY @RM 24.79	OH23 36.1	17-326	75
UNNAMED TRIBUTARY @RM 3.7	OH16 19.1	17-749	84
UNNAMED TRIBUTARY @RM 4.6	OH11 7.1	17-485	77
UNNAMED TRIBUTARY @RM 41.49	OH19 31.1	17-193	71
UNNAMED TRIBUTARY @RM 44.58	OH19 31.2	17-194	72
UNNAMED TRIBUTARY @RM 49.5	OH62 3.1	14-318	65
UPPER NORTH FORK	OH 5 66	06-926	40
UPPER TWIN CREEK	OH47 92	10-085	46
Unnamed tributary	OH25 21.6	01-556	4
Unnamed tributary	OH72 11.8	04-636	29
VAN HORN CREEK	OH55 41	14-804	66
VAN HYNING RUN	OH10 30	17-542	79
VERMILION RIVER (EAST FORK TO LAKE ERIE)	OH85 7	21-001	94
VERMILION RIVER (HEADWATERS TO SOUTHWEST BRAN	OH85 15	21-001	94
VERMILION RIVER (SOUTHWEST BRANCH TO EAST BRA	OH85 12	21-001	94
W. FK. WEST MANSFIELD TRIB.	OH35 21	02-194	9
WABASH RIVER (BEAVER CREEK TO OHIO/INDIANA LI	OH63 1	22-001	94
WABASH RIVER (HEADWATERS TO STONY CREEK)	OH63 19	22-001	95
WABASH RIVER (STONY CREEK TO BEAVER CREEK)	OH63 16	22-001	94
WAHOO DITCH	OH88 9	19-042	92
WAKATOMIKA CREEK (BRUSHY FORK TO MUSKINGUM R)	OH20 2	17-960	87
WALHONDING R. (MOHICAN/KOKOSING TO KILLBUCK)	OH20 31	17-600	81
WALHONDING RIVER (KILLBUCK CR. TO TUSCARAWAS)	OH20 24	17-600	81
WALNUT CREEK (GEORGE CREEK TO LITTLE WALNUT C	OH40 9	02-078	6
WALNUT CREEK (HEADWATERS TO PAWPAW CREEK)	OH40 21	02-078	6

Waterbody Name	WBID	River Code	Page
WALNUT CREEK (LITTLE WALNUT CREEK TO SCIOTO R	OH40 4	02-078	6
WALNUT CREEK (PAWPAW CREEK TO SYCAMORE CREEK)	OH40 16	02-078	6
WALNUT CREEK (SYCAMORE CREEK TO GEORGE CREEK)	OH40 13	02-078	6
WASTEWEIR RUN	OH22 59.1	17-237	74
WAUGH RUN	OH41 8	02-301	12
WEGEE CREEK	OH 7 50	06-049	33
WELKER LATERAL	OH62 3.2	14-317	65
WEST BR. WOLF CREEK (HEADWATERS TO LAUREL RN)	OH24 40	17-044	69
WEST BR. WOLF CREEK (LAUREL RUN TO MUSKINGUM)	OH24 36	17-044	69
WEST BRANCH (HOAGLIN CREEK TO PRAIRIE CREEK)	OH69 3	04-132	23
WEST BRANCH ASHTABULA RIVER	OH93 10	07-004	40
WEST BRANCH BLACK R. (CHARLEMONT CR. TO ELK C	OH86 17	20-020	93
WEST BRANCH BLACK R. (ELK CR. TO E. BR. BLACK	OH86 13	20-020	93
WEST BRANCH HURON R. (SLATE RUN TO EAST BRANC	OH84 8	12-200	54
WEST BRANCH HURON RIVER (HEADWATERSTO MARSH R	OH84 20	12-200	54
WEST BRANCH MONTVILLE LANDFILL TRIB.	OH87 18.2	13-214	56
WEST BRANCH NIMISHILLEN CREEK	OH11 8	17-464	77
WEST BRANCH RATTLESNAKE CREEK)	OH42 16	02-562	14
WEST BRANCH ROCKY RIVER (COSSETT CR. TO PLUM	OH87 12	13-200	55
WEST BRANCH ROCKY RIVER (NORTH BR. TO COSSETT	OH87 15	13-200	56
WEST BRANCH ROCKY RIVER (PLUM CR. TO EAST BRA	OH87 10	13-200	55
WEST BRANCH SUNDAY CREEK	OH26 14	01-240	2
WEST BRANCH TONTAGONY CREEK	OH74 2.1	04-085	21
WEST FORK (BIG CREEK TO MIDDLE FORK)	OH 4 27	08-300	42
WEST FORK (BUCK RUN TO OHIO BRUSH CREEK)	OH48 18	10-220	47
WEST FORK (HEADWATERS TO BIG CREEK)	OH 4 34	08-300	42
WEST FORK CLEAR CREEK	OH43 49.5	02-586	14
WEST FORK DUCK CREEK (HEADWATERS TO SALT RUN)	OH 9 32	06-340	36
WEST FORK DUCK CREEK (SALT RUN TO E FK DUCK)	OH 9 27	06-340	36
WEST FORK E. FK. LITTLE MIAMI RIVER	OH53 56	11-150	51
WEST FORK HONEY CREEK	OH56 6	14-046	59
WEST FORK MILL CREEK (UPSTREAM)	OH62 26	23-004	95
WEST FORK OHIO BRUSH CR. (HEADWATERS TO BUCK	OH48 26	10-220	47
WEST FORK STATELINE CREEK	OH 4 11.3	08-117	41
WEST LIBERTY WWTP TRIB.	OH58 48.1	14-144	63
WEST SIPPO CREEK	OH10 5.1	17-575	81
WHEELING CREEK (COX RUN TO OHIO RIVER)	OH 6 24	06-800	39
WHEELING CREEK (HEADWATERS TO COX RUN)	OH 6 34	06-800	39
WHETSTONE CREEK (HEADWATERS TO SHAW CREEK)	OH36 12	02-450	13
WHITE EYES CREEK	OH15 3	17-502	78
WHITEOAK CREEK (STERLING RUN TO OHIO RIVER)	OH49 42	10-400	48
WHITEWATER RIVER (OHIO/INDIANA TO GREAT MIAMI	OH62 3	14-300	64
WIERTH DITCH	OH64 27	04-525	28
WILDCAT CREEK	OH71 17	04-115	22
WILLEY CREEK	OH90 9	15-004	67
WILLIAMS CREEK	OH 6 11	06-504	37
WILLOW CREEK	OH81 5	05-013	31
WILLS CREEK	OH 5 24	06-066	33
WILLS CREEK (BIRDS CAMP TO WHITE EYES CREEK)	OH21 6	17-800	85
WILLS CREEK (BUFFALO FORK TO LEATHERWOOD CR.)	OH21 43	17-800	85
WILLS CREEK (LEATHERWOOD CREEK TO SALT FORK)	OH21 29	17-800	85
WILLS CREEK (SALT FORK TO BIRDS RUN)	OH21 14	17-800	85
WILLS CREEK (WHITE EYES CREEK TO MUSKINGUM R)	OH21 1	17-800	85
WILSON CREEK	OH42 18	02-563	14
WILSON CREEK	OH52 12	11-210	52
WINGFOOT LAKE OUTLET	OH88 3	19-032	92
WINTERSVILLE "C" TRIB.	OH 5 24.1	06-085	34
WINTERSVILLE "D" TRIB.	OH 5 2.3	06-218	36
WINTERSVILLE 'E' TRIB.	OH 5 2.2	06-217	36
WITTEN FORK	OH 8 44	06-440	37
WITTEN RUN	OH 8 30	06-431	37
WOLF CREEK	OH 5 77	06-936	40
WOLF CREEK	OH10 2	17-530	79
WOLF CREEK	OH10 28	17-540	79
WOLF CREEK	OH19 12	17-160	71
WOLF CREEK	OH60 36	14-037	59
WOLF CREEK	OH75 4	04-004	18
WOLF CREEK	OH82 15	05-005	30
WOLF RUN	OH30 38	09-533	45
WOOD CREEK	OH89 8.1	19-043	92
YANKEE RUN	OH 3 3	18-506	90
YELLOW BOY RUN	OH 5 2.1	06-216	36
YELLOW CREEK	OH 2 5	18-007	88
YELLOW CREEK	OH74 11	04-019	19
YELLOW CREEK	OH89 25	19-021	91
YELLOW CREEK (BRUSH CREEK TO OHIO RIVER)	OH 5 38	06-900	39
YELLOW CREEK (ELKHORN CREEK TO TOWN FORK)	OH 5 60	06-900	39
YELLOW CREEK (HEADWATERS TO ELKHORN CREEK)	OH 5 76	06-900	39
YELLOW CREEK (TOWN FORK TO BRUSH CREEK)	OH 5 54	06-900	39
YELLOW SPRINGS CREEK	OH50 20	11-040	50
YOKER CREEK	OH21 63	17-872	86
ZELLERBACH TRIB.	OH40 20	02-224	10

Waterbody Name	WBID	River Code	Page	Waterbody Name	WBID	River Code	Page
ZIELKE DITCH	OH71 20.2	04-158	24				
ZIMBER DITCH	OH11 8.3	17-481	77				
ZINC DITCH	OH75 16.21	04-090	21				