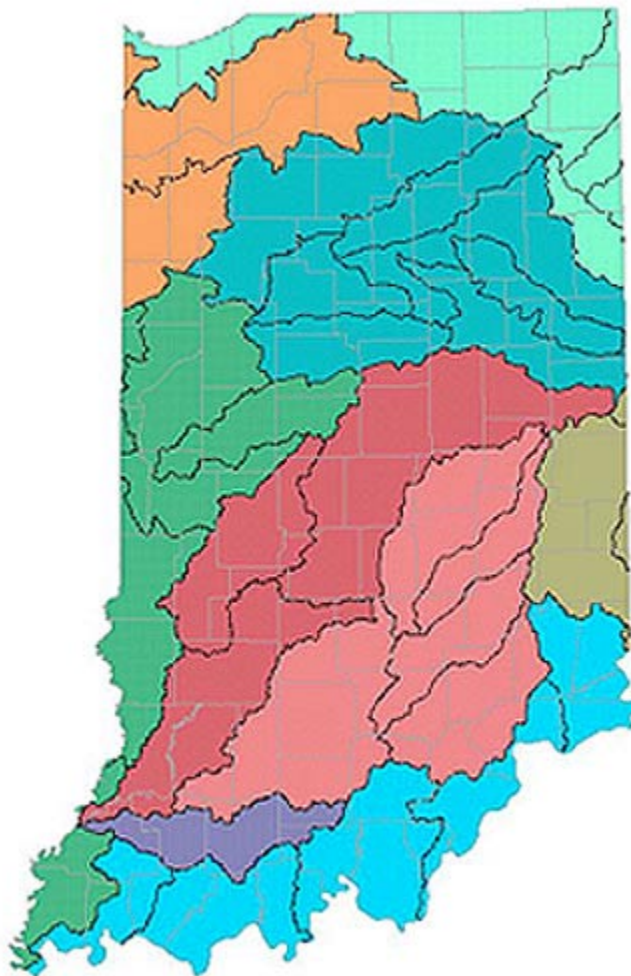


US EPA ARCHIVE DOCUMENT

INDIANA INTEGRATED WATER MONITORING AND ASSESSMENT REPORT 2002

Section 305(b) Water Quality Report
and
Consolidated List
Including Section 303(d) List of Impaired Waters
(Category 5)



Indiana Department of Environmental Management
Office of Water Quality
Planning and Restoration Branch
Indianapolis, Indiana



IDEM/34/02/004/2002

TABLE OF CONTENTS

TABLE OF CONTENTS.....	I
EXECUTIVE SUMMARY	1
BACKGROUND	4
Introduction	4
Water Pollution Control Program	4
Watershed Approach.....	5
Water Quality Standards Program	7
Point Source Program	8
Nonpoint Source Control Program	10
Coordination with Other Agencies	12
Cost/ Benefit Assessment.....	12
Cost Information.....	12
Benefits Information	13
Special State Concerns and Recommendations.....	15
SURFACE WATER ASSESSMENT	16
Current Surface Water Monitoring Program.....	16
Plan for Achieving Comprehensive Assessments.....	19
Assessment Methodology and Summary Data	20
List of Impaired Waters	23
Rivers and Streams Water Quality Assessment.....	24
Designated Use Support.....	24
Causes/Stressors and Sources of Impairment of Designated Uses.....	26
Great Lakes Shoreline Water Quality Assessment.....	29
Great Lake Water Quality Assessment – Lake Michigan.....	31
Lake Water Quality Assessment	32
Designated Use Support.....	32
Wetlands Assessment	38
Development of Wetland Water Quality Standards.....	38
Integrity and Extent of Wetland Resources	38
Wetland Protection Activities	39
Wetland Compensatory Mitigation: An Ongoing Study.....	40
Public Health/ Aquatic Life Concerns	43
Drinking Water Source Assessment.....	44

GROUND WATER ASSESSMENT 2002 DRAFT 3/27/02.....	46
Introduction to Indiana Ground Water.....	46
Ground Water Data for the 2002 305(b) Reporting Cycle.....	47
Major Sources of Ground Water Contamination.....	47
Ground Water Protection Programs	51
Nitrate Sampling in 22 Representative Hydrogeologic Settings.....	55
Ground Water for Drinking Water Monitoring Data.....	57
REFERENCES.....	63
APPENDIX A METADATA AND DEFINITIONS.....	66
APPENDIX B SITE SPECIFIC WATERBODY ASSESSMENTS	66
APPENDIX C COMPREHENSIVE BASIN AQUATIC LIFE USE ASSESSMENT	66
APPENDIX D LAKES TROPHIC STATUS AND TRENDS	66
APPENDIX E CONSOLIDATED LISTING METHODOLOGY	66
APPENDIX F CONSOLIDATED LIST – CATEGORIES 2 THROUGH 5.....	66

List of Figures

Figure 1	Monitoring Location Density and Draft 303(d) Waters 2002	6
Figure 2	Nonpoint Section 319 Projects	11
Figure 3	State Revolving Fund Loans as of October 1, 2001.....	14
Figure 4	Basin Report Year	16
Figure 5	Mitigation Sites by Application Year	40
Figure 6	Mitigation Site Status	41
Figure 7	Mitigation Site Distribution	42
Figure 8	Representative Hydrogeologic Setting Monitoring Networks	54

List of Tables

Table 1	Summary of Use Support - Waterbodies Reported 1998 through 2002.....	1
Table 2	Atlas	4
Table 3	State Revolving Fund Loans.....	13
Table 4	Indiana Watersheds and Basins.....	18
Table 5	Criteria for Use Support Assessment	21
Table 6	Summary of Fully Supporting, Threatened and Impaired Waters - Streams	24
Table 7	Individual Use Support Summary - Streams	25
Table 8	Comprehensive Aquatic Life Use Support – Streams	25
Table 9	Summary of National and State Causes Impairing Waters – Streams	26
Table 10	Summary of National and State Sources Impairing Waters – Streams	27

Table 11	Summary of Fully Supporting, Threatened and Impaired Great Lakes Shoreline.....	29
Table 12	Individual Use Support Summary – Great Lakes Shoreline	29
Table 13	Summary of National and State Causes Impairing Great Lakes Shoreline	29
Table 14	Summary of National and State Sources Impairing Great Lakes Shoreline	30
Table 15	Summary of Fully Supporting, Threatened and Impaired Great Lake.....	31
Table 16	Individual Use Support Summary – Great Lake	31
Table 17	Summary of Fully Supporting, Threatened and Impaired Lakes, Reservoirs.....	34
Table 18	Individual Use Support Summary – Lakes, Reservoirs	34
Table 19	Summary of National and State Causes Impairing Lakes, Reservoirs.....	35
Table 20	Summary of National and State Sources Impairing Lakes, Reservoirs	35
Table 21	Trophic Status of Significant Public Lakes Assessed 1996-2000	37
Table 22	Trends in Trophic Status of Significant Public Lakes - 1996-2000.....	37
Table 23	Extent of Wetlands by Type.....	39
Table 24	Spills 1996 - 1999	44
Table 25	Major Sources of Ground Water Contamination.....	48
Table 26	Summary of State Ground Water Protection Programs (through 12/31/00)	52
Table 27	Summary of Nitrate Sample Results	56
Table 28	Summary of Ground Water for Drinking Water Monitoring Data.....	58
Table 29	Summary of Ground Water for Drinking Water Monitoring Data.....	59
Table 30	Summary of Ground Water for Drinking Water Monitoring Data.....	60
Table 31	Summary of Ground Water for Drinking Water Monitoring Data.....	61
Table 32	Summary of Ground Water for Drinking Water Monitoring Data.....	62