

TABLE OF CONTENTS

Executive Summary	i
Index of Figures	4
Index of Tables	6
Foreword	7
Section 1— Introduction	
National Nutrient Load Concerns and Priorities	
<i>Gulf of Mexico</i>	9
<i>Is Progress Being Made (Basinwide)?</i>	11
<i>What about in Indiana?</i>	13
Nutrient Load Concerns on Indiana’s Waters	15
<i>Indiana Drainage Overview</i>	16
<i>The Great Lakes</i>	17
Guiding Principles	18
Section 2 – Engage Stakeholders and Partners	19
Section 3 – Watershed Prioritization and Characterization	
Prioritize 8-digit HUC Watersheds	22
Further Prioritization	26
Section 4 – Water Quality Monitoring in Indiana’s Waters	
Water Quality Standards	30
IDEM Water Monitoring Programs	
<i>Surface Water Monitoring Programs</i>	30
<i>Ground Water Monitoring Programs</i>	32
<i>Data Sharing & Inventory</i>	34
IDEM Lake Monitoring Data	35
Harmful Algal Bloom (HAB) Monitoring Data	35
CWA 305(b) Water Quality Assessments	39
303(d) list of Impaired Waters	40
Total Maximum Daily Loads (TMDLs)	40
Section 5—Nutrient Criteria	
Narrative Limits	42
Numeric Criteria	42
Section 6 – Practices to Reduce Point Source and Non-Point Source Pollution	
Point Source Pollution	44
<i>Point Source (Regulated) Strategy Objectives</i>	44
Non-Point Source Pollution	45
<i>Non-Point Source Strategy Objectives</i>	45
<i>Practices to Reduce Non-Point Source Pollution</i>	47

Section 7 – Develop the Indiana Science Assessment	51
Components of the Indiana Science Assessment	52
Benefits of the Indiana Science Assessment	57

Section 8 – Programs, Projects, and Initiatives Supporting Nutrient Reduction

Point Source/Regulatory Programs	
<i>National Pollutant Discharge Elimination System (NPDES)</i>	58
Non-Point Source/Regulated Programs	
<i>Wellhead Protection Program</i>	59
<i>Confined Feeding Operations (CFOs) Program</i>	59
<i>Concentrated Animal Feeding Operations (CAFOs) Program</i>	59
<i>Fertilizer and Detergent Regulations</i>	61
<i>Storm Water Runoff Programs</i>	61
Non-Point Source/Non-Regulated (Voluntary) Programs	62
<i>Indiana State Department of Agriculture Programs (ISDA)</i>	
<i>Conservation Reserve Enhancement Program (CREP)</i>	62
<i>Infield Advantage (INFA)</i>	64
<i>Clean Water Indiana (CWI)</i>	65
<i>Indiana Department of Natural Resources (IDNR)</i>	
<i>Lake and River Enhancement (LARE) Grant Funding</i>	66
<i>Healthy Rivers Initiative (HRI)</i>	67
<i>Indiana Department of Environmental Management (IDEM)</i>	
<i>IDEM Section 319(h) Grant Funding</i>	69
<i>IDEM Section 205(j) Grant Funding</i>	69
<i>Clean Water Act (CWA) Section 106 Supplemental Funding</i>	71
<i>USDA, Natural Resources Conservation Service (NRCS)</i>	
<i>Conservation Stewardship Program (CSP)</i>	72
<i>Environmental Quality Incentives Program (EQIP)</i>	72
<u><i>NRCS Easement Programs</i></u>	
<i>Agricultural Conservation Easements Program (ACEP)</i>	72
<i>Agricultural Land Easements (ALE)</i>	73
<i>Wetland Reserve Easements (WRE)</i>	73
<i>Wetland Reserve Enhancement Program (WREP)</i>	73
<u><i>NRCS Program Initiatives</i></u>	
<i>Regional Conservation Partnership Program (RCPP)</i>	73
<i>Mississippi River Basin Initiative (MRBI)</i>	73
<i>National Water Quality Initiative (NWQI)</i>	74
<i>Great Lakes Restoration Initiative (GLRI)</i>	74
<i>Joint Chiefs Landscape Restoration Partnership</i>	74
<i>USDA, Farm Service Agency (FSA)</i>	
<i>Conservation Reserve Program (CRP)</i>	77
<i>Conservation Reserve Enhancement Program (CREP)</i>	77
<i>Safe Acres for Wildlife Enhancement (SAFE)</i>	77
Agricultural Initiatives	78
<i>Indiana’s Conservation Partnership Soil Health Philosophy</i>	78
<i>A System’s Approach of Conservation Practices</i>	79

<i>Conservation Cropping Systems Initiative (CCSI)</i>	81
<i>Indiana Agriculture Nutrient Alliance (IANA)</i>	81
<i>4R Nutrient Stewardship Certification Program</i>	83
<i>Market-Based Agricultural Initiative</i>	
<i>Ohio River Basin Water Quality Trading Project</i>	84
<i>Agricultural Landowner Educational Resources</i>	86
Section 9 – Measuring Impacts	87
Indiana’s Tillage and Cover Crop Transects	87
EPA Region 5 Nutrient Load Reduction Modeling and Mapping: Watershed- Wide	92
<i>Strengthening and Improving Our Method</i>	93
Significant Waterbodies	98
GIS Story Maps for Indiana’s Ten Major River & Lake Basins	99
Performance Measures Monitoring	99
Adaptive Management	100
Section 10 – Milestones and Action Items	101
Section 11 – “What You Can Do to Protect Water Quality in Indiana”	110
Interactive Online Resources	112
Appendix A	
Acronyms	114
Appendix B	
Permitted Facilities with Water Quality Monitoring for Ammonia and Phosphorus – Maps	117
Appendix C	
Indiana Science Assessment Strategy	128