

ACRONYMS AND ABBREVIATIONS

A

ACOE – Army Corps of Engineers
ATV – All Terrain Vehicles

B

BFE- Base Flood Elevation
BOD-Biochemical Oxygen Demand
BMP- Best Management Practices

C

CAFO – Confined Animal Feeding Operations
CAP – Continuing Authorities Program
CFO – Confined Feeding Operation
CFU- Colony Forming Units
CR- County Road
CREP- Conservation Reserve Enhancement Program
CRP- Conservation Reserve Program
CSOs- Combined Sewer Overflows
CWA- Clean Water Act
CWP- Center for Watershed Protection

D

DO- Dissolved Oxygen

E

EMC- Event Mean Concentration
EPA- Environmental Protection Agency
EPT- Ephemeroptera (mayfly), Plecoptera (stonefly), and Tricoptera (caddisfly)
EQIP - Environmental Quality Incentives Program

F

FCA- Fish Consumption Advisory
FEMA- Federal Emergency Management Agency
FIRM- Flood Insurance Rate Maps
FOTG- Field Office Technical Guide
FSA – Farm Service Agency

H

HBI- Hilsenhoff Biotic Index
HEL- Highly Erodible Land
HUC- Hydrologic Unit Code

I

IBI – Index of Biotic Integrity
IDEM – Indiana Department of Environmental Management
IDNR – Indiana Department of Natural Resources
INDOT – Indiana Department of Transportation

ISDA – Indiana State Department of Agriculture

L

LARE – Lake and River Enhancement Program
L-THIA – Long-Term Hydrologic Impact Assessment

M

mg/L- milligrams per liter
mIBI- Macroinvertebrate Index of Biotic Integrity
MOS- Margin of Safety

N

NAWQA - National Water-Quality Assessment
NLCD – National Land Cover Data
NPDES- National Pollutant Discharge Elimination System
NPS- Nonpoint Source
NRCS- Natural Resource Conservation Service

P

Pb- Lead
PCB - Polychlorinated Biphenyls
ppm – Parts per Million
ppt – Parts per Thousand
PRD- Planned Residential Developments
PUD- Planned Unit Developments

Q

QHEI- Qualitative Habitat Evaluation Index

S

SVOCs – Semivolatile Organic Compounds
SWCD- Soil & Water Conservation District

T

T&E- Threatened and Endangered
TKN- Total Kjeldahl Nitrogen
TMDL- Total Maximum Daily Load
TSS- Total Suspended Solids

U

ug/L- Micrograms per Liter
USACE – U.S Army Core of Engineers
USGS-United States Geological Survey

W

WHIP- Wetland Habitat Incentive Program
WMP- Watershed Management Plan
WRP- Wetland Reserve Program

REFERENCES

American Public Health Association, American Water Works Association and Water Environment Federation. 1995. Standard Methods for the Examination of Water and Wastewater. Nineteenth Edition.

Baird, C., and M. Jennings, 1996. Characterization of Nonpoint Sources and Loadings to the Corpus Christi Bay National Estuary Program Study Area, Texas Natural Resource Conservation Commission.

Baker, N.T., Stone, W.W., Wilson, J.T., and Meyer, M.T., 2006, Occurrence and Transport of Agricultural Chemicals in Leary Weber Ditch Basin, Hancock County, Indiana 2003-04: U.S. Geological Survey Scientific Investigations Report 2006-5251, 44p.

Baker, N.T., Stone, W.W., Frey, J.W., and Wilson, J.T., 2006, Water and Agricultural-Chemical Transport in a Midwestern, Tile-Drained Watershed: Implications of Conservation Practices: U.S. Geological Survey Fact Sheet 2007-3084, 6p.

Baker, N.T. and Frey, J.W., 1993-1995, Fish Community and Habitat Data at Selected Sites in the White River Basin, Indiana: U.S. Geological Survey Open File Report 96-653A, 44p.

Bednarik, A.F. and W.P. McCafferty. 1979. Biosystematic Revision of the Genus *Stenonema* (Ephemeroptera: Heptageniidae). Canadian Bulletin of Fisheries and Aquatic Sciences. Bulletin 201.

Bergman E.A. and W.L. Hilsenhoff. 1978. *Baetis* (Ephemeroptera: Baetidae) of Wisconsin. The Great Lakes Entomologist. Volume 11.

Böhlke, J.K., J.W. Harvey., and M.A. Voytek. 2004. Reach-scale isotope tracer experiment to quantify denitrification and related processes in a nitrate-rich stream, midcontinent United States. *Limnology and Oceanography* 49: 821-838.

Capel, P.D., P.A. Hamilton, M.L. Erwin. 2004 Studies by the U.S Geological Survey on Sources, Transport, and Fate of Agricultural Chemicals: U.S Geological Survey Fact Sheet 2004-3098, 4p.

Carter, D. S. 1996. Determination of atrazine and its major degradation products in soil pore water by solid-phase extraction, chemical derivatization, and gas chromatography/mass spectrometry. U.S. Geological Survey Open-File Report 96-459, 12 p.

Chin, D.A. 2000. Water Resources Engineering.

Chow, Ven Te, 1959. Open-Channel Hydraulics. McGraw-Hill Book Company.

Clark, G.D. and D. Larrison. 1980. The Indiana Water Resource, Availability, Uses, and Needs. Indiana Department of Natural Resources.

Crawford, C.G. 1995. Occurrence of pesticides in the White River, Indiana, 1991-95. U.S. Geological Survey Fact Sheet 233-95, 4 p.

Crawford, C.G. 1996. Influence of natural and human factors on pesticide concentrations in surface waters of the White River basin, Indiana. U.S. Geological Survey Fact Sheet 119-96, 4 p.

Crawford, C.G., M.J. Lydy, and J.W. Frey. 1996. Fishes of the White River basin, Indiana. U.S. Geological Survey Water-Resources Investigations Report 96-4232, 8 p.

Cummings, K.S. and C.A. Mayer. 1992. Field Guide to Freshwater Mussels of the Midwest. Illinois Natural History Survey. Manual 5. December 1992.

Engel, B. A. 1997. GIS-based CN Runoff Estimation, Agricultural and Biological Engineering Departmental Report, Purdue University.

Fenelon, J.M. 1998. Water quality in the White River basin, Indiana, 1992-96. U.S. Geological Survey Circular 1150, 34 p.

Fenelon, J. M. and R. C. Moore. 1996. Occurrence of pesticides in ground water in the White River basin, Indiana, 1994-95. U.S. Geological Survey Fact Sheet 084-96, 4p.

Fenelon, J.M. and R.C. Moore. 1998. Transport of agrichemicals to ground and surface water in a small central Indiana watershed. *Journal of Environmental Quality* 27: 884-894.

Frey, J.W., N.T. Baker, M.J. Lydy, and W.W. Stone. 1996. Assessment of water quality at selected sites in the White River basin, Indiana, 1993 and 1995 using biological indices. U.S. Geological Survey Fact Sheet 209-96, 4p.

Hall, Robert D. 1998. *Geology of Indiana*, Indiana University Purdue University at Indianapolis, Center for Earth and Environmental Science and Department of Geology. Second Edition.

Hilsenhoff, W.L. 1982. Using a Biotic Index to Evaluate Water Quality in Streams. Wisconsin Department of Natural Resources. Technical Bulletin No. 132.

Hilsenhoff, W.L. 1988. Rapid Field assessment of organic pollution with a family-level biotic index. *The North American Benthological Society* 7(1): 65-68.

Hilsenhoff, W.L. 1995. *Aquatic Insects of Wisconsin. Keys to Wisconsin Genera and Notes on Biology, Habitat, Distribution and Species.* Publication Number 3 of the Natural History Museums Council, University of Wisconsin-Madison.

Hoosier Riverwatch. 2005. Volunteer Stream Monitoring Training Manual.

Indiana Department of Environmental Management. Office of Water Quality. 2008. DRAFT Total Maximum Daily Load for *Escherichia coli* (*E. coli*) for the Sugar Creek Watershed, Hancock, Henry, Johnson, Madison, and Shelby Counties.

Indiana State Department of Health, Indiana Department of Environmental Management, Indiana Department of Natural Resources. 2006. Indiana Fish Consumption Advisory.

Jackson, M.T. 1997. The Natural Heritage of Indiana. Indiana University Press.

Jacques, D.V. and C.G. Crawford. 1991. National water-quality assessment program-White Horse River basin. U.S. Geological Survey Open-File Report 91-169.

Karr, J.R., K.D. Faush, P.L. Angermeier, P.R. Yant, and I.J. Schlosser. 1986. Assessing biological integrity in running waters: A method and its rationale. Special publication 5. Illinois Natural History Survey.

Lal, R. 1999. Integrated Watershed Management in the Global Ecosystem.

Lathrop, T.R., 2006 Environmental Setting of the Sugar Creek Watershed and Leary Weber Ditch Basins, Indiana 2002-04: U.S. Geological Survey Scientific Investigations Report 2006-5170, 27p.

McCafferty, W.P. and R.D. Waltz. 1990. Revisionary Synopsis of the Baetidae (Ephemeroptera) of North and Middle America. Department of Entomology, Purdue University. Transactions of the American Entomological Society 116(4): 769-799.

Merritt, R.W. and K.W. Cummins. 1996. An Introduction to the Aquatic Insects of North America. Third Edition. Kendall/Hunt Publishing Company.

Moore, R. C. and J. M. Fenelon. 1996. Occurrence of nitrate in ground water in the White River basin, Indiana, 1994-95. U.S. Geological Survey Fact Sheet 110-96.

Munn, M.D. and P.A. Hamilton 2003. New studies initiated by the U.S. Geological Survey- Effects of nutrient enrichment on stream ecosystems. U.S. Geological Survey Fact Sheet 118-03, 4p.

Myers, D. N. and Metzker, K. D. 2000. Status and trends in suspended-sediment discharges, soil erosion, and conservation tillage in the Maumee River basin-Ohio, Michigan, and Indiana. U.S. Geologic Survey Water-Resources Investigations Report 00-4091, 38 p.

Office of Water Quality- TMDL Program., 2007 Total Maximum Daily Load for *Escherichia coli* (*E. coli*) for the Sugar Creek Watershed, Hancock, Henry, Johnson, Madison and Shelby Counties. Indiana Department of Environmental Management. 47 p.

Schoebelen, D.J., Fenelon, J.M., Baker, N.T., Martin, J.D, Bayless, R.E., Jacques, D.V., and Crawford, C.B., 1997, Environmental Setting and Natural Factors and Human Influences

Affecting Water Quality in the White River Basin: U.S. Geological Survey; Water-Resources Investigation Report 97-4260, 66 p.

Schuster, G.A. and D.A. Etnier. 1978. A Manual for the Identification of the Larvae of the Caddisfly Genera *Hydropsyche* Pictet and *Symphitopsyche* Ulmer in Eastern and Central North America (Trichoptera: Hydropsychidae). Environmental Monitoring and Support Laboratory. Office of Research and Development. U.S. Environmental Protection Agency. October 1978.

U.S. Environmental Protection Agency. 1974. Taxonomy and Ecology of *Stenonema* Mayflies (Heptageniidae: Ephemeroptera). National Environmental Research Center, Office of Research and Development. December 1974.

U.S. Environmental Protection Agency. 1989. Rapid Bioassessment Protocols for Use in Streams and Rivers. Benthic Macroinvertebrates and Fish. EPA/440/4-89/001. May 1989.

U.S. Environmental Protection Agency. 1999. Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers. Periphyton, Benthic Macroinvertebrates and Fish. Second Edition. EPA 841-B-99-002. July 1999.

U.S. Environmental Protection Agency. 2002. National Management Measures for the Control of Nonpoint Pollution from Agriculture.

U.S. Environmental Protection Agency. 2005. National Management Measures to Protect and Restore Wetlands and Riparian Areas for the Abatement of Nonpoint Source Pollution.

U.S. Environmental Protection Agency. 2002. Urban Stormwater BMP Performance Monitoring: A Guidance Manual for Meeting the National Stormwater BMP Database Requirements.

U.S. Geological Survey. 2000. Pesticides in stream sediment and aquatic biota: current understanding of distribution and major influences. U.S. Geological Survey Fact Sheet 092-00, 4 p.

U.S. Geological Survey. 2003. Sugar Creek watershed selected for a national water-quality study. U.S. Geological Survey Fact Sheet 084-03, 2 p.

Vecchia, A.V. and C.G. Crawford. 2006. Simulation of daily pesticide concentrations from watershed characteristics and monthly climatic data. U.S. Geological Survey Scientific Investigations Report 2006 5181, 60 p.

Vito Vanoni. 1975. Sedimentation Engineering.

Wetzel, R.G. 1975. Limnology.

Wetzel, R.G. and G.E. Likens. 1979. Limnological Analysis.