ATTACHMENT 3

IDEM's Total Maximum Daily Load Program Priority Framework and Development Schedule

Indiana's 303(d) TMDL Program Priority Framework:

A Process for Implementing the National CWA 303(d) Long-Term Vision in Indiana

Watershed Planning and Restoration Section

Watershed Assessment and Planning Branch

Office of Water Quality

Indiana Department of Environmental Management

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Background

The U.S. Environmental Protection Agency (U.S. EPA) has worked with State program managers to develop a new long-term Vision and Goals for the Clean Water Act (CWA) Section 303(d) Program. In Section 303(d) of the CWA, States are required to develop a list of impaired waters that do not meet State water quality standards, and establish priority rankings for waters on the list to develop Total Maximum Daily Loads (TMDLs). The purpose of this revision to the existing CWA Section 303(d) program is to assist with focusing State efforts to advance the effectiveness of the program in the future. Currently there are six tenants that form the groundwork of the new national long-term vision ("the Vision"):

Prioritization – For the 2016 integrated reporting cycle and beyond, States review, systematically prioritize, and report priority watersheds or waters for restoration and protection in their biennial integrated reports to facilitate State strategic planning for achieving water quality goals

Assessment – By 2020, States identify the extent of healthy and CWA Section 303(d) impaired waters in each State's priority watersheds or waters through site-specific assessments

Protection – For the 2016 reporting cycle and beyond, in addition to the traditional TMDL development priorities and schedules for waters in need of restoration, States identify protection planning priorities and approaches along with schedules to help prevent impairments in healthy waters, in a manner consistent with each State's systematic prioritization

Alternatives – By 2018, States use alternative approaches, in addition to TMDLs, that incorporate adaptive management and are tailored to specific circumstances where such approaches are better suited to implement priority watershed or water actions that achieve the water quality goals of each state, including identifying and reducing nonpoint sources of pollution

Engagement – By 2014, EPA and the States actively engage the public and other stakeholders to improve and protect water quality, as demonstrated by documented, inclusive, transparent, and consistent communication; requesting and sharing feedback on proposed approaches; and enhanced understanding of program objectives

Integration – By 2016, EPA and the States identify and coordinate implementation of key point source and nonpoint source control actions that foster effective integration across CWA programs, other statutory programs (e.g., CERCLA, RCRA, SDWA, CAA), and the water quality efforts of other Federal departments and agencies (e.g., Agriculture, Interior, Commerce) to achieve the water quality goals of each state (U.S. EPA 2013).

Indiana's Current Approach

The Clean Water Act (CWA) Section 303(d) Program in Indiana is administered by the Indiana Department of Environmental Management's (IDEM) Watershed Assessment and Planning Branch (WAPB), which also conducts surface water quality monitoring according to *the Indiana Surface Water Quality Strategy, 2011-2019*. While the WAPB uses data from several of its monitoring programs to determine water quality status, it primarily relies on a stratified, random sampling design to meet the CWA 305(b) requirement to "assess all waters." This approach is employed in a rotating basin cycle of nine years and will result in a comprehensive and updated data set for the entire state by 2019. Water quality data collected are assessed using applicable water quality criteria in the State's water quality standards and waterbodies are placed into one or more categories of the state's Consolidated List, available biennially in Indiana's Integrated Report.

While only a portion of the 63,600 miles of streams and rivers in Indiana have been monitored to date (leaving approximately 40,000 miles unassessed due to lack of data), approximately 20,000 miles of streams are listed as impaired under Category 5. Since the inception of the TMDL program in Indiana, 46 TMDL documents have been developed resulting in 1,225 individual TMDLs moving waterbodies from the 303(d) List of Impaired Waters Category 5 into Category 4a. Prior to the commencement of the Vision, IDEM's WAPB worked with U.S. EPA Region 5 every 303(d) listing cycle to determine the number of TMDLs to be developed. With the development of a national focus on showing results of water quality improvement, including the advent of several U.S. EPA focused success measures, Indiana has been moving toward a more holistic approach of TMDL development. In 2005, the TMDL and Nonpoint Source Program (NPS) were combined into the same section to realize efficiencies and better integrate the work of the two programs with the intended outcome that better outreach to watershed organizations would lead to implementation of the Reasonable Assurance section of the TMDL. In 2010, the TMDL and NPS program areas were part of an agency reorganization that resulted in a move to the Assessments Branch, which conducts surface water monitoring. This move allowed the integration of TMDL staff with other monitoring staff, yielding multiple benefits, including a more rigorous sampling design.

In 2012, it was determined that IDEM's involvement in monitoring for watershed management planning would coincide with monitoring done in preparation for a TMDL in the same watershed. The first TMDL project in which this occurred was the Deep River TMDL project, which was monitored in 2013. The TMDL report was approved by U.S. EPA in 2014 and the watershed group is currently incorporating information from the TMDL into a watershed management plan. This TMDL development and implementation strategy has been replicated in four additional watersheds to date, with plans to begin monitoring in yet another watershed in 2015. Key to the success of these projects is the availability of a watershed group in the TMDL watershed – without local support, implementation of the nonpoint source sections of the TMDL is likely to be compromised.

Moving forward with the Vision

At the June 2014 Watershed Planning and Restoration Section staff meeting, a program priority team committee was formed to begin work on Indiana's strategy to implement the national Vision for TMDL programs. The core members of the team were the NPS and TMDL program manager, the TMDL program team leader, the NPS senior watershed planner, and two watershed specialists and Section 319 grant project managers. Ad hoc members were involved as needed, including upper management, other program areas, and watershed monitoring staff. The team members began meeting regularly starting in August 2014, working toward the development of the new Indiana 303(d) TMDL Vision.

Indiana's TMDL Program Prioritization

Priority Watershed Selection Criteria

The focus of this process document is defining the method used to prioritize which waters will be the focus of TMDL planning and watershed restoration. The process for determining the TMDL priority watersheds will meet the following criteria (Figure 1). The first four criteria are required elements, while the remaining criteria are additional considerations when choosing between watersheds identified by working through the first four.

(1) First, the prioritization will begin by identifying those watersheds with impairments based upon Indiana's water quality standards and 303(d) list, since the CWA mandates that TMDLs be developed for impaired waterways. As the monitoring and assessment process continues to discover new impairments, the priority list will be updated from the most recent 303(d) List of Impaired Waters

(2) The second criterion ranks watersheds based on their current ability to meet Indiana's aquatic life designated use. Waters that have been designated with an impaired biotic community, but show a reasonable expectation for ecological recovery by means of a "good" habitat score (QHEI) and likely due to nutrient and/or sediment will be prioritized first for TMDL development. Indiana has a highly modified hydrologic landscape, and where current law and codes prohibit physical stream restoration, NPS improvements will most reasonably show biological community response where adequate habitat already exists. Within these watersheds identified for impaired aquatic life use, IDEM will also prioritize impairments of the recreational use due to exceedances of the *E. coli* criteria.

(3) The third criterion will identify those watersheds where neither an existing TMDL, nor a watershed planning effort has been completed. This criterion minimizes duplication of efforts where work is already progressing to improve water quality.

(4) The fourth criterion to be considered for TMDL development is the reasonable expectation that an entity to drive implementation exists in the watershed. Part of the TMDL process requires the State to provide "reasonable assurance" that the load reduction recommendations will be implemented. The presence of a dedicated entity (e.g. watershed group) motivated to implement a TMDL will reinforce the reasonable assurance of NPS reductions.

Additional Criteria Considered:

- Identify those surface waters that provide a source of water for public drinking water use. Citizens rely on adequate clean water for drinking, commercial and industrial uses for everyday life.

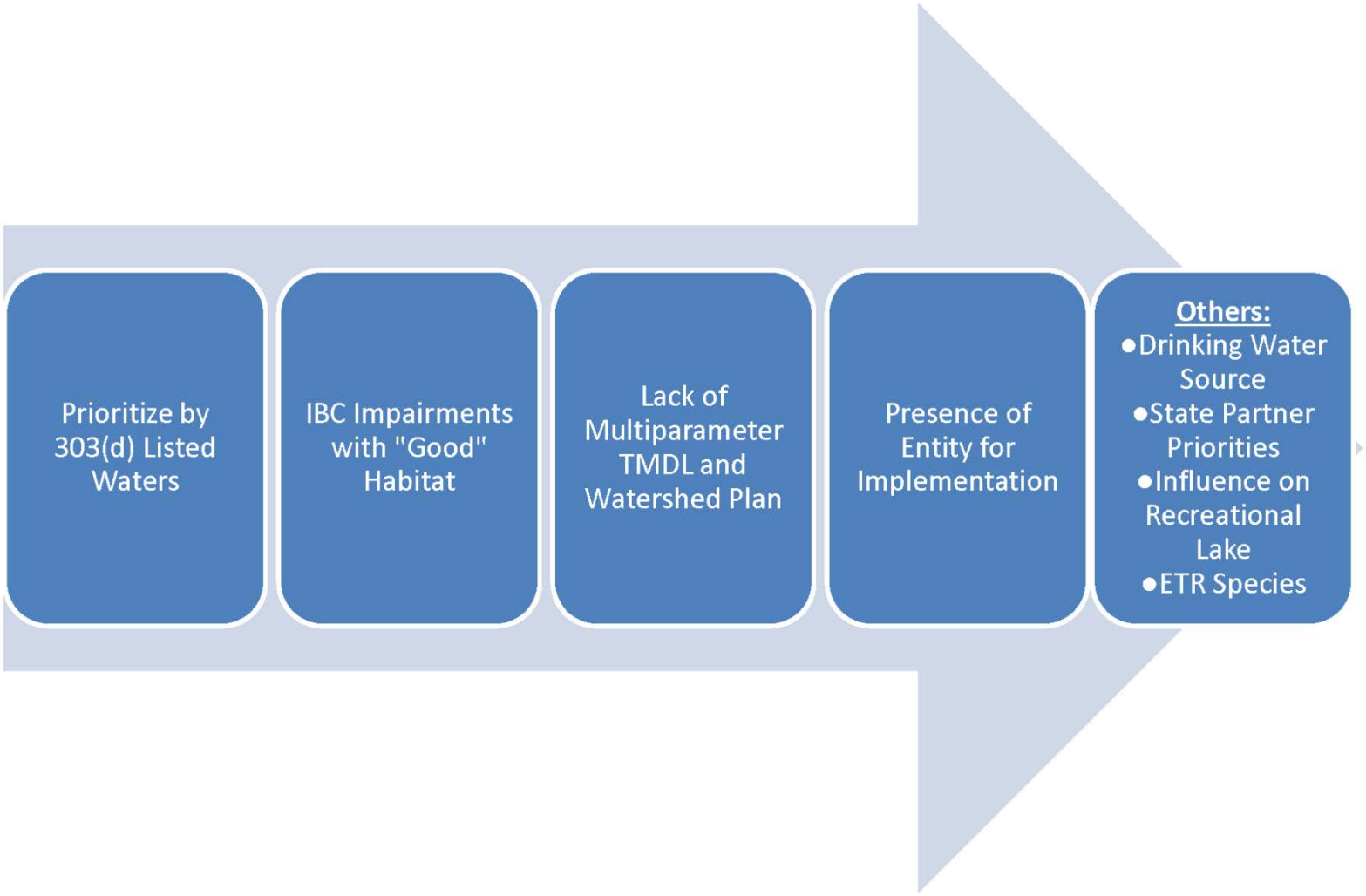
- Identify waters that are upstream of public-access lakes used for recreation. Nutrient-induced harmful algal blooms have been on the rise recently in Indiana lakes and reservoirs, threatening the use of these waterbodies for primary contact recreation.

- Identify waters that are home to endangered, threatened or rare species. Water quality pollution and loss of habitat have reduced the number of some species to critical numbers; restoration and protection of the remaining populations should be a priority.

- TMDL development based on priorities specific to the State of Indiana. This step is based on conversations about overlapping priorities with internal and external agency partners such as the Indiana Conservation Partnership (ICP)[1], as well as consideration of time sensitive or current relevant high profile issues (e.g. Western Lake Erie Basin eutrophication).

[1] The ICP is comprised of eight Indiana agencies and organizations who share a common goal of promoting conservation. Members include the Indiana Association of Soil and Water Conservation Districts, Indiana Department of Environmental Management, Indiana Department of Natural Resources, Indiana State Department of Agriculture, Purdue Cooperative Extension Service, Indiana State Soil Conservation Board, USDA Farm Service Agency and the USDA Natural Resources Conservation Service.

Figure 1 Priority watershed selection process



Priority List 2015-2022

The key to IDEM's current TMDL implementation strategy is the availability of a local stakeholder group ready, willing, and able to implement the TMDL. Due to the nature and dynamics of such groups, the availability of a cohesive group of stakeholders to lead a watershed planning and/or implementation effort subsequent to development of a TMDL is often unknown on a long-term basis. Therefore, though IDEM's process for choosing TMDL watersheds remains consistent, its list of priority watersheds is in a necessary state of flux. IDEM also finds itself with resource constraints that limit its TMDL development commitment to providing TMDLs for one 10-digit watershed per fiscal year. These TMDLs will be restricted to streams and rivers with *E.coli* impairment, and impaired biotic communities caused by one or more of the following conditions:

- Dissolved oxygen
- Algae
- Total Suspended Solids
- Phosphorus

IDEM has agreed with U.S. EPA to develop three TMDLs that are already in progress using the prior selection methods, and one TMDL using the new Vision prioritization method, each focused on 10-digit watershed scales. These four TMDLs are high priority for completion in the short term, as watershed groups are poised to develop plans and drive implementation in the area. These four TMDLs and their completion years are as follows:

- Southern Whitewater River (2015)
- Mississinewa River (2016)
- South Fork Blue River (2016)
- Salt Creek (2017)

The 10-digit watersheds listed in Appendix A may meet IDEM's criteria for TMDL development over the next six years. Each watershed has been selected using the four priority watershed selection criteria (p.3-4). They have been further prioritized for potential short-term and long-term selection using the additional watershed selection criteria (p.4), categorizing them as either high (green), medium (coral), or low (blue). Beginning in 2016, IDEM will select one 10-digit watershed per year for TMDL development and implementation after 2017, as agreed upon with U.S. EPA.

TMDL Alternatives and Protection Strategies

IDEM does not expect to explicitly prioritize TMDL alternatives or protection strategies at this time, but will explore the use of TMDL alternatives and protection strategies as the situation arises, and work with USEPA to collaborate on mutually acceptable plans.

APPENDIX A - Potential IDEM Priority Watershed Selections with Impaired Biotic Communities

HUC_CD	STATION_NAME	WATERBODY_NAME	COUNTY_NAME	AUID	TMDL	WMP	OTHER LISTINGS?	Drinking water source in 10-digit?	WS Group in 10-digit/Watershed Specialist Comments	ETR?	Influence Lake?	Trophic State of Lake	Priority for TMDL
051201040104	WAE020-0038	Blue Babe Branch	Whitley	INB0414_T1003	NONE	NONE	NONE	NO	Middle Eel	NO	N		HIGH
051202011003	WWU-10-0002	Carmel Creek	Hamilton	INW01A3_T1004	NONE	NONE	E COLI	YES	City of Carmel/MS4	NO	Y - Lk Woodland	No data available	HIGH
051202070701	WEM-07-0004	Vernon Fork Muscatatuck River	Jennings	INW0771_01	NONE	NONE	DO, NUTRIENTS, PH, MERCURY (FT)	YES	There is no active watershed group, but the SWCD expressed interest in this watershed and the HUC10 upstream.	Y (mussels)	N		HIGH
051202080202	WEL030-0004	Guthrie Creek	Lawrence	INW0822_01	NONE	NONE	NONE	NO	Lawrence Co. is partnering with Monroe Co. on the Salt Creek project. I haven't heard back from them on whether they have interest in Guthrie Creek.	NO	N		HIGH
051202081502	WEL170-0014	East Fork White River	Dubois	INW08F2_01	NONE	NONE	PCBS	NO	Pike Co expressed interest	Y (mussels)	Y - Dogwood Lk	Mesotrophic	HIGH
050902030506	OML060-0019	Laughery Creek	Ripley	INV0356_01	NONE	NONE	NONE	YES	There is no active watershed group in Laughery Creek, but Historic Hoosier Hills RC&D and the SWCD expressed interest in working in this watershed. It sounds like there may stakeholder interest in this watershed as well.	NO	Y - Versailles State Park Lk	Hypereutrophic	MEDIUM
051201011601	WUW160-0007	Little Pipe Creek	Miami	INB01G1_01	NONE	NONE	NONE	NO	TNC priority area	? - maybe m	N		MEDIUM
051201030606	WMI060-0008	Mississinewa River	Miami	INB0366_01	NONE	NONE	E COLI, PCBS	NO	NO	NO	Y - Mississinewa Reservoir		MEDIUM
051201111801	WBU190-0002	Maria Creek	Knox	INB11J1_01	NONE	NONE	E COLI	NO	One of counties interested	NO	N		MEDIUM
051202011206	WWU130-0039	Pleasant Run Creek	Marion	INW01C6_02	NONE	NONE	E COLI	NO	WRA	NO	N		MEDIUM
051202011206	WWU130-0048	Pleasant Run Creek	Johnson	INW01C6_02	NONE	NONE	E COLI	NO	WRA	NO	N		MEDIUM
051401040205	OBS050-0001	Buck Creek	Harrison	INN0425_03	NONE	NONE	E COLI	NO	There is no active group in this watershed. The SWCD expressed interest in working in this watershed, just not in the immediate future.	NO	N		MEDIUM
051201060902	WTI080-0004	Mud Creek	Pulaski	INB0692_01	NONE	NONE	NONE	NO	To my knowledge, there are no active watershed groups in this area. Pulaski Co SWCD has attended a few meetings, but hasn't expressed any interest in starting a watershed group yet.	Y (mussels)	N		LOW
051201061207	WTI120-0005	Honey Creek	White	INB06C7_01	NONE	NONE	MERCURY	NO	To my knowledge, there are no active watershed groups in this area. White Co SWCD is just now getting involved in the Big	Y (mussels)	Y - Shafer Y - Freeman	Eutrophic No data available	LOW
051201081606	WLV200-0002	Tributary of Norton Creek	Vermillion	INB08G6_T1006	NONE	NONE	DO, E COLI	NO	To my knowledge, there are no active watershed groups in this area. Vermillion Co SWCD has historically focused in the Vermillion watershed (HUC 05120109) and is now interested in the Busseron watershed.	NO	N		LOW
051201111902	WBU200-0019	Tributary of Snapp Creek	Knox	INB11K2_T1001	NONE	NONE	DO, E COLI	NO	Knox Co?	NO	N		LOW
051402010102	OLP040-0006	Tributary of Neglie Creek	Perry	INE0112_T1007	NONE	NONE	DO	NO	Maybe Spencer Co	NO	N		LOW