



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

IDEM
OFFICE OF
WATER QUALITY
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REPLY TO THE ATTENTION OF
WW-16J

JUL 19 2005

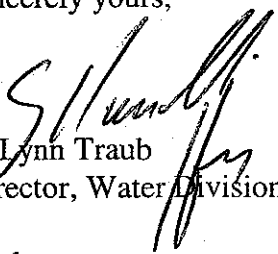
Ms. Martha Clark Mettler
Indiana Department of Environmental Management
100 N. Senate Ave.
P.O. Box 6015
Indianapolis, IN 46206

Dear Ms. Clark Mettler:

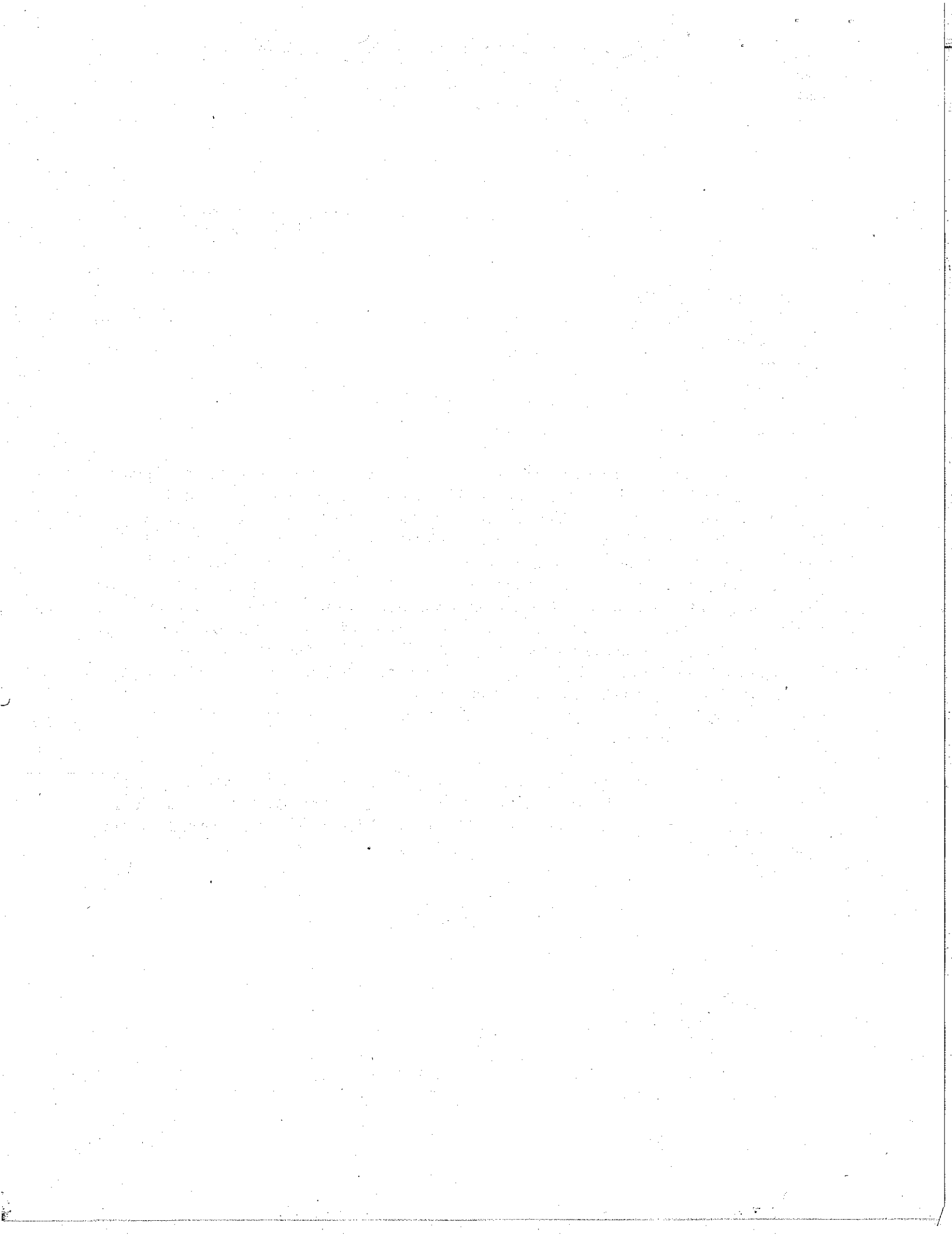
The United States Environmental Protection Agency (U.S. EPA) has reviewed the final Total Maximum Daily Loads (TMDLs) for the Indian Creek Watershed in Indiana. They include Indian Creek and tributaries, Bear Creek, Robertson Creek, Camp Creek, Sand Creek, Oliver Creek, Crooked Creek, Pike Creek, Barnes Creek, Goose Creek and unnamed tributaries, Lick Creek and unnamed tributaries, Long Run Creek, Indian Trace Creek, Sartor Ditch, Sedwick Ditch, and other unnamed tributaries. The Indiana Department of Environmental Management's (IDEM's) TMDLs address the *E. coli* impairment of recreational use in Morgan and Johnson Counties. Based on this review, U.S. EPA has determined that Indiana's twenty-five TMDLs for *E. coli* meet the requirements of Section 303(d) of the Clean Water Act and U.S. EPA's implementing regulations at 40 C.F.R. Part 130. Therefore, U.S. EPA hereby approves twenty-five TMDLs for the Indian Creek Watershed in Indiana. The statutory and regulatory requirements, and U.S. EPA's review of Indiana's compliance with each requirement, are described in the enclosed decision document.

We wish to acknowledge Indiana's effort in submitting these TMDLs, addressing twenty-five *E. coli* impairments, and look forward to future TMDL submissions by the State of Indiana. If you have any questions, please contact Mr. Kevin Pierard, Chief of the Watersheds and Wetlands Branch at 312-886-4448.

Sincerely yours,


Jo Lynn Traub
Director, Water Division

Enclosure
cc: Andrew Pelloso, IDEM



TMDL: Indian Creek Watershed, Indiana

Date: JUL 19 2005

DECISION DOCUMENT FOR APPROVAL OF THE INDIAN CREEK WATERSHED TMDL IN INDIANA

Section 303(d) of the Clean Water Act (CWA) and EPA's implementing regulations at 40 C.F.R. Part 130 describe the statutory and regulatory requirements for approvable TMDLs. Additional information is generally necessary for EPA to determine if a submitted TMDL fulfills the legal requirements for approval under Section 303(d) and EPA regulations, and should be included in the submittal package. Use of the verb "must" below denotes information that is required to be submitted because it relates to elements of the TMDL required by the CWA and by regulation. Use of the term "should" below denotes information that is generally necessary for EPA to determine if a submitted TMDL is approvable. These TMDL review guidelines are not themselves regulations. They are an attempt to summarize and provide guidance regarding currently effective statutory and regulatory requirements relating to TMDLs. Any differences between these guidelines and EPA's TMDL regulations should be resolved in favor of the regulations themselves.

1. Identification of Waterbody, Pollutant of Concern, Pollutant Sources, and Priority Ranking

The TMDL submittal should identify the waterbody as it appears on the State's/Tribe's 303(d) list. The waterbody should be identified/georeferenced using the National Hydrography Dataset (NHD), and the TMDL should clearly identify the pollutant for which the TMDL is being established. In addition, the TMDL should identify the priority ranking of the waterbody and specify the link between the pollutant of concern and the water quality standard (see section 2 below).

The TMDL submittal should include an identification of the point and nonpoint sources of the pollutant of concern, including location of the source(s) and the quantity of the loading, e.g., lbs/per day. The TMDL should provide the identification numbers of the NPDES permits within the waterbody. Where it is possible to separate natural background from nonpoint sources, the TMDL should include a description of the natural background. This information is necessary for EPA's review of the load and wasteload allocations, which are required by regulation.

The TMDL submittal should also contain a description of any important assumptions made in developing the TMDL, such as:

- (1) the spatial extent of the watershed in which the impaired waterbody is located;
- (2) the assumed distribution of land use in the watershed (e.g., urban, forested, agriculture);
- (3) population characteristics, wildlife resources, and other relevant information affecting the characterization of the pollutant of concern and its allocation to sources;

(4) present and future growth trends, if taken into consideration in preparing the TMDL (e.g., the TMDL could include the design capacity of a wastewater treatment facility); and

(5) an explanation and analytical basis for expressing the TMDL through *surrogate measures*, if applicable. *Surrogate measures* are parameters such as percent fines and turbidity for sediment impairments; chlorophyll *a* and phosphorus loadings for excess algae; length of riparian buffer; or number of acres of best management practices.

Comment:

Location Description: Indian Creek is located in central Indiana, in Morgan and Johnson Counties (Figure 1 of the TMDL submittal). Indian Creek is listed as impaired in Indiana's 1998, 2002, and 2004 303(d) list for *E. coli*. The Indian Creek watershed starts in the southeast corner of Johnson County and flows west through Morgan County, where it discharges into the West Fork of the White River. The major tributaries of Indian Creek include Lick Creek, Goose Creek, Barnes Creek, Long Run Creek, Crooked Creek, Oliver Creek, Pike Creek, Indian Trace Creek; in 2004, more segments were listed, including Bear Creek, Robertson Creek, Sand Creek, Camp Creek, and other tributaries, which encompass 178.11 miles of the watershed. Sartor Ditch, Sedwick Ditch, and unnamed tributaries are not on the 2004 303(d) list, but were impaired for *E. coli* when sampled in 2001. All of the twenty-five segments included in this TMDL submittal are located in the West Fork White River Basin in Hydrologic Unit Code (HUC) 05120201170. The twenty-five impaired segments included in the TMDL submittal in the Section titled "Background" are found below:

Waterbody Name	303(d) List ID	Segment ID Number(s)	Length (miles)	Impairment
Indian Creek	120	INW01H1 T1097, INW01H2 T1098, INW01H3 T1099, INW01H4 T1100, INW01H5 T1101, INW01H6 T1102, INW01H7 T1103, INW01H1 1099	26.69	<i>E. coli</i>
Bear Creek	120	INW01H3 T1098	3.82	<i>E. coli</i>
Robertson Creek	120	INW01H6 T1101	10.51	<i>E. coli</i>
Camp Creek	120	INW01H5 00	7.06	<i>E. coli</i>
Sand Creek	120	INW01H7 00	6.60	<i>E. coli</i>
Oliver Creek, Crooked Creek, Pike Creek	120	INW01H4 00, INW04H4 T1101, INW01H4 1102	32.10	<i>E. coli</i>
Barnes Creek, Goose Creek	120	INW01H2 00	33.88	<i>E. coli</i>
Lick Creek and Unnamed Tributaries	120	INW01H1 T1096	3.60	<i>E. coli</i>
Long Run Creek	120	INW01H3 T1097	7.29	<i>E. coli</i>
Indian Trace Creek	120	INW01H5 T1102	10.79	<i>E. coli</i>
Sartor Ditch	120	INW01H7 00	3.40	<i>E. coli</i>
Sedwick Ditch	120	INW01H5 T1103	6.03	<i>E. coli</i>
Unnamed Tributaries	120	INW01H6 T1103, INW01H1 T1098, INW01H3 T1096, INW01H7 1101	15.61	<i>E. coli</i>

Topography and Land Use: As of 1992, approximately 44% of the landuse in the Indian Creek watershed is agricultural, the remaining is approximately 51% forested, 3% developed, 1% water and 1% unknown. There was not a large change in use since the previous evaluation in the mid-1970s, which showed a 1% difference in all categories when compared to current landuse.

Pollutant of concern: The pollutant of concern is *E. coli*.

Pollutant sources: There are both point sources and nonpoint sources of *E. coli* in the Indian Creek watershed. The nonpoint sources include:

- Wildlife - deer, geese, ducks, raccoons, turkeys, and other animals
- Septic systems - Morgan and Johnson County Health Departments report septic failure during the past year (according to IDEM communication with county health departments within the TMDL submittal)
- Small livestock operations - no specific information but could be a source of *E. coli*

There are two NPDES permitted facilities that are point sources but are *not* contributing to the *E. coli* problem. They are listed in Table 1 of the TMDL submittal. The Brown County Water Utility does not have a sanitary component in their discharge and is not considered a source of *E. coli*. The Morgantown WWTP had *E. coli* reporting requirements added in February, 2003, but there were no exceedences of the end-of-pipe *E. coli* limits.

IN0044971	Brown County Water Utility	not <i>E. coli</i> source
IN0036820	Morgantown WWTP	not <i>E. coli</i> source

The removal and disposal of the manure, litter, or processed wastewater that is generated as the result of feeding operations falls under the regulations for confined feeding operations (CFOs) and concentrated animal feeding operations (CAFOs); there were three CFOs in the watershed. The permits were voided in 2000 and there are no enforcement actions at this time, so these locations are not considered to be a significant source of *E. coli*, according to the State. Small animal operations may be a source, though there are no significant data to support this.

Priority ranking: IDEM states that the TMDL development schedule corresponds with their basin-rotation water quality monitoring schedule. The development of most TMDLs is based on the schedule to take advantage of all available resources. Prioritization is based on whether the designated uses are being met, the magnitude of the impairment, and other plans for the watershed. For example, some watershed groups may want to implement some Best Management Practices (BMPs) and assess their success without a TMDL, or may be awaiting guidance from the U.S. EPA.

EPA finds that the TMDL submittal from IDEM satisfies all requirements concerning this first element.

2. Description of the Applicable Water Quality Standards and Numeric Water Quality Target

The TMDL submittal must include a description of the applicable State/Tribal water quality standard, including the designated use(s) of the waterbody, the applicable numeric or narrative water quality criterion, and the antidegradation policy (40 C.F.R. §130.7(c)(1)). EPA needs this information to review the loading capacity determination, and load and wasteload allocations, which are required by regulation.

The TMDL submittal must identify a numeric water quality target(s) – a quantitative value used to measure whether or not the applicable water quality standard is attained. Generally, the pollutant of concern and the numeric water quality target are, respectively, the chemical causing the impairment and the numeric criteria for that chemical (e.g., chromium) contained in the water quality standard. The TMDL expresses the relationship between any necessary reduction of the pollutant of concern and the attainment of the numeric water quality target. Occasionally, the pollutant of concern is different from the pollutant that is the subject of the numeric water quality target (e.g., when the pollutant of concern is phosphorus and the numeric water quality target is expressed as Dissolved Oxygen (DO) criteria). In such cases, the TMDL submittal should explain the linkage between the pollutant of concern and the chosen numeric water quality target.

Comment:

The TMDL submittal describes designated uses, numeric criteria, and antidegradation policy of the Clean Water Act.

Use Designation: The impaired designated use for the waterbodies in the Indian Creek watershed is for total body contact recreational use during the recreational season, April 1st through October 31st.

Narrative Standards: The narrative criteria are the general water quality criteria that apply to all surface waters. These criteria state that all waters must be free from sludge; floating debris; oil and scum; color- and odor-producing materials; substances that are harmful to human, animal or aquatic life; and nutrients in concentrations that may cause algal blooms.

Numeric Standards: 327 IAC 2-1-6(d) established the total body contact recreational use *E. coli* Water Quality Standard (WQS) for all waters in the non-Great Lakes system as follows: "*E. coli* bacteria, using membrane filter (MF) count, shall **not exceed one hundred twenty-five (125) per one hundred (100) milliliters as a geometric mean** based on not less than five (5) samples equally spaced over a thirty (30) day period **nor exceed two hundred thirty-five (235) per one hundred (100) milliliters in any one (1) sample in a thirty (30) day period.**"

Targets: the target is the standard as stated in the previous paragraph, for both the single sample standard and geometric mean standard, which is applicable from April 1st through October 31st.

EPA finds that the TMDL submittal from IDEM satisfies all requirements concerning this second element.

3. Loading Capacity - Linking Water Quality and Pollutant Sources

A TMDL must identify the loading capacity of a waterbody for the applicable pollutant. EPA regulations define loading capacity as the greatest amount of a pollutant that a water can receive without violating water quality standards (40 C.F.R. §130.2(f)).

The pollutant loadings may be expressed as either mass-per-time, toxicity or other appropriate measure (40 C.F.R. §130.2(i)). If the TMDL is expressed in terms other than a daily load, e.g., an annual load, the submittal should explain why it is appropriate to express the TMDL in the unit of measurement chosen. The TMDL submittal should describe the method used to establish the cause-and-effect relationship between the numeric target and the identified pollutant sources. In many instances, this method will be a water quality model.

The TMDL submittal should contain documentation supporting the TMDL analysis, including the basis for any assumptions; a discussion of strengths and weaknesses in the analytical process; and results from any water quality modeling. EPA needs this information to review the loading capacity determination, and load and wasteload allocations, which are required by regulation.

TMDLs must take into account *critical conditions* for stream flow, loading, and water quality parameters as part of the analysis of loading capacity. (40 C.F.R. §130.7(c)(1)). TMDLs should define applicable *critical conditions* and describe their approach to estimating both point and nonpoint source loadings under such *critical conditions*. In particular, the TMDL should discuss the approach used to compute and allocate nonpoint source loadings, e.g., meteorological conditions and land use distribution.

Comment:

Loading capacity: the loading capacity is the *E. coli* water quality standard, that is,

- 125/100 ml (geometric mean (5) samples equally spaced over a thirty (30) day period),
- nor exceed 235/100ml (one (1) sample in a thirty (30) day period.)

Method for cause and effect relationship: Measured flow data are used for flow duration curves. The West Fork White River U.S. Geological Survey (USGS) flow gage 03354000 data in Centerton, Indiana, was used in developing the load duration curve for Indian Creek. The gage is located upstream of the mouth of Indian Creek on the West Fork White River. The gage was chosen because there was a good correlation "fit" at this location.

To calculate the individual Indian Creek flow, which has no gauge, as a proportion of the total volume of flow from the West Fork White River which has a gauge, the total flow from the gage for the West Fork White River downstream of Indian Creek was used; it includes an areal extent of 2619 square miles. Then this flow was multiplied by the percent or proportion of drainage

area of 93.8 square miles represented by the Indian Creek watershed. The calculated flow for the Indian Creek watershed was then used to create the load duration curve for the Indian Creek watershed.

The curves reflect a range of natural occurrences from extremely high flows to extremely low flows. The flow curves are then transformed to load duration curves by applying water quality criteria values for *E. coli* and appropriate conversion factors. Then the existing monitored water pollutant loads from various types of locations (wet weather/nonpoint sources, or dry weather/point sources) are added to the curve and other conversion factors are applied. In this way it can be determined which locations contribute loads above or below the water quality standard, or target, line. Then the next step is to determine where reductions need to occur.

Critical conditions: the load duration curve represents pollutants during both dry periods and the washoff during storm events. Both of these conditions are critical for the conceptual model in describing how the pollutants behave in a natural environment and were addressed in developing the curve.

EPA finds that the TMDL submittal from IDEM satisfies all requirements concerning this third element.

4. Load Allocations (LAs)

EPA regulations require that a TMDL include LAs, which identify the portion of the loading capacity attributed to existing and future nonpoint sources and to natural background. Load allocations may range from reasonably accurate estimates to gross allotments (40 C.F.R. §130.2(g)). Where possible, load allocations should be described separately for natural background and nonpoint sources.

Comment:

Load Allocation: The load allocation is equal to the Water Quality Standard: 125/100 ml (geometric mean (5) samples equally spaced over a thirty (30) day period), nor exceed 235/100ml (one (1) sample in a thirty (30) day period).

The assumption used by the State in this load allocation strategy is that there are equal bacterial loads per unit area for all lands within the watershed. The responsibility for reducing the loads is relative to the amount of land under the jurisdiction of the various local governments. "This gives a clear indication of the relative amount of effort that will be required by each entity to restore and maintain the designated total body contact recreational use of the Indian Creek watershed." This concept is exemplified by Table 2 below taken from the TMDL submittal, indicating amounts of land in each Township in the watershed that will be responsible for reductions, with reductions in direct proportion to the percentage of land in each township.

Table 2: Land Area Distribution for the Indian Creek Watershed

Municipality	Acres	Percent watershed
Morgan County		
Jackson Township	1700.84	30.49
Washington Township	1214.22	21.76
City of Martinsville	152.58	2.74
Johnson County		
Hensley Township	1782.07	31.94
Nineveh Township	98.83	1.77
Union Township	4.46	0.09
Brown County		
Jackson Township	387.87	6.95
Hamblin Township	64.28	1.15
Monroe County		
Benton Township	173.58	3.11

EPA finds that the TMDL submittal from IDEM satisfies all requirements concerning this fourth element.

5. Wasteload Allocations (WLAs)

EPA regulations require that a TMDL include WLAs, which identify the portion of the loading capacity allocated to individual existing and future point source(s) (40 C.F.R. §130.2(h), 40 C.F.R. §130.2(i)). In some cases, WLAs may cover more than one discharger, e.g., if the source is contained within a general permit.

The individual WLAs may take the form of uniform percentage reductions or individual mass based limitations for dischargers where it can be shown that this solution meets WQSs and does not result in localized impairments. These individual WLAs may be adjusted during the NPDES permitting process. If the WLAs are adjusted, the individual effluent limits for each permit issued to a discharger on the impaired water must be consistent with the assumptions and requirements of the adjusted WLAs in the TMDL. If the WLAs are not adjusted, effluent limits contained in the permit must be consistent with the individual WLAs specified in the TMDL. If a draft permit provides for a higher load for a discharger than the corresponding individual WLA in the TMDL, the State/Tribe must demonstrate that the total WLA in the TMDL will be achieved through reductions in the remaining individual WLAs and that localized impairments will not result. All permittees should be notified of any deviations from the initial individual WLAs contained in the TMDL. EPA does not require the establishment of a new TMDL to reflect these revised allocations as long as the total WLA, as expressed in the TMDL, remains the same or decreases, and there is no reallocation between the total WLA and the total LA.

Comment:

Wasteload Allocation (WLA): One of the two point source locations with NPDES permits mentioned previously has no sanitary component (no *E. coli* effluent); the other must maintain water quality standards according to the permit. The waste load allocation is equal to the Water Quality Standard: 125/100 ml (geometric mean (5) samples equally spaced over a thirty (30) day period), nor exceed 235/100ml (one (1) sample in a thirty (30) day period).

EPA finds that the TMDL submittal from IDEM satisfies all requirements concerning this fifth element.

6. Margin of Safety (MOS)

The statute and regulations require that a TMDL include a margin of safety (MOS) to account for any lack of knowledge concerning the relationship between load and wasteload allocations and water quality (CWA §303(d)(1)(C), 40 C.F.R. §130.7(c)(1)). EPA's 1991 TMDL Guidance explains that the MOS may be implicit, i.e., incorporated into the TMDL through conservative assumptions in the analysis, or explicit, i.e., expressed in the TMDL as loadings set aside for the MOS. If the MOS is implicit, the conservative assumptions in the analysis that account for the MOS must be described. If the MOS is explicit, the loading set aside for the MOS must be identified.

Comment:

There is an implicit margin of safety because no rate of decay was used for the pathogens. Since pathogenic organisms have a more limited capability of surviving outside their hosts, a rate of decay would normally be used. However, it was determined by IDEM that it is more conservative to use the water quality standard of 125/100ml *E. coli* (geometric mean (5) samples equally spaced over a thirty (30) day period) or 235/100 ml *E. coli* (one (1) sample in a thirty (30) day period), and not to apply a rate of decay which could result in a discharge limit greater than the water quality standard.

EPA finds that the TMDL submittal from IDEM contains an appropriate MOS satisfying all requirements concerning this sixth element.

7. Seasonal Variation

The statute and regulations require that a TMDL be established with consideration of seasonal variations. The TMDL must describe the method chosen for including seasonal variations. (CWA §303(d)(1)(C), 40 C.F.R. §130.7(c)(1)).

Comment:

The TMDL is expressed by using WQS for total body contact during the recreational season (April 1st through October 31st) defined previously. Any high and low flows are addressed

within the TMDL because as a concentration-based TMDL all the standards will be met regardless of the season or flow events.

EPA finds that the TMDL submittal from IDEM satisfies all requirements concerning this seventh element.

8. Reasonable Assurances

When a TMDL is developed for waters impaired by point sources only, the issuance of a National Pollutant Discharge Elimination System (NPDES) permit(s) provides the reasonable assurance that the wasteload allocations contained in the TMDL will be achieved. This is because 40 C.F.R. 122.44(d)(1)(vii)(B) requires that effluent limits in permits be consistent with 'the assumptions and requirements of any available wasteload allocation' in an approved TMDL.

When a TMDL is developed for waters impaired by both point and nonpoint sources, and the WLA is based on an assumption that nonpoint source load reductions will occur, EPA's 1991 TMDL Guidance states that the TMDL should provide reasonable assurances that nonpoint source control measures will achieve expected load reductions in order for the TMDL to be approvable. This information is necessary for EPA to determine that the TMDL, including the load and wasteload allocations, has been established at a level necessary to implement water quality standards.

EPA's August 1997 TMDL Guidance also directs Regions to work with States to achieve TMDL load allocations in waters impaired only by nonpoint sources. However, EPA cannot disapprove a TMDL for nonpoint source-only impaired waters, which do not have a demonstration of reasonable assurance that LAs will be achieved, because such a showing is not required by current regulations.

Comment:

- One of the reasonable assurances in the TMDL submittal includes continued monitoring practices of NPDES facilities so that they will not contribute to impairment of the watershed. The Morgantown Wastewater Treatment Plant (IN0034932) has not reported values above the standard, but it will continue to be monitored.
- There are watershed projects in the area for helping define and address nonpoint sources in the Indian Creek watershed area.
- Lamb Lake Lot Owners Association has instituted a septic system inspection program. Homeowners are encouraged to keep their systems in good working order.
- IDEM has hired a Watershed Specialist for this area of the State. The coordinator will be responsible for assisting stakeholders with projects and gaining interest in improving water quality in the Indian Creek watershed.
- Other potential future activities describe BMPs that include the following possible measures: riparian area management; manure collection and storage; contour row crops; no-till farming; manure nutrient testing; drift fences to direct livestock movement; pet

clean-up in urban areas; and public education for septic management that reduces leakage and removes illicit discharges.

EPA finds that this criterion has been adequately addressed.

9. Monitoring Plan to Track TMDL Effectiveness

EPA's 1991 document, Guidance for Water Quality-Based Decisions: The TMDL Process (EPA 440/4-91-001), recommends a monitoring plan to track the effectiveness of a TMDL, particularly when a TMDL involves both point and nonpoint sources, and the WLA is based on an assumption that nonpoint source load reductions will occur. Such a TMDL should provide assurances that nonpoint source controls will achieve expected load reductions and, such TMDL should include a monitoring plan that describes the additional data to be collected to determine if the load reductions provided for in the TMDL are occurring and leading to attainment of water quality standards.

Comment:

Monitoring will occur on the 5-year rotating basin schedule or when a portion of the TMDL implementation is in place. Monitoring will be adjusted as needed for continued source identification and determination of whether standards are being met.

EPA finds that this criterion has been adequately addressed.

10. Implementation

EPA policy encourages Regions to work in partnership with States/Tribes to achieve nonpoint source load allocations established for 303(d)-listed waters impaired by nonpoint sources. Regions may assist States/Tribes in developing implementation plans that include reasonable assurances that nonpoint source LAs established in TMDLs for waters impaired solely or primarily by nonpoint sources will in fact be achieved. In addition, EPA policy recognizes that other relevant watershed management processes may be used in the TMDL process. EPA is not required to and does not approve TMDL implementation plans.

Comment:

There are several suggestions for BMPs in the TMDL watershed. They include structural or managerial practices such as:

- riparian management to protect streambeds and riverbanks;
- manure collection and storage that protects surface water and ground water from runoff;
- plant contour row crops perpendicular to the slope of the land;
- no-till farming to reduce wind and water erosion, catch snow, conserve soil and water, protect water quality, and provide wildlife habitat; and

- maintenance of plant residue to protect soil particles, increase infiltration, and reduce wind and water speed over the surface.

EPA reviews, but does not approve, implementation plans. EPA finds that this criterion has been adequately addressed.

11. Public Participation

EPA policy is that there should be full and meaningful public participation in the TMDL development process. The TMDL regulations require that each State/Tribe must subject calculations to establish TMDLs to public review consistent with its own continuing planning process (40 C.F.R. §130.7(c)(1)(ii)). In guidance, EPA has explained that final TMDLs submitted to EPA for review and approval should describe the State's/Tribe's public participation process, including a summary of significant comments and the State's/Tribe's responses to those comments. When EPA establishes a TMDL, EPA regulations require EPA to publish a notice seeking public comment (40 C.F.R. §130.7(d)(2)).

Provision of inadequate public participation may be a basis for disapproving a TMDL. If EPA determines that a State/Tribe has not provided adequate public participation, EPA may defer its approval action until adequate public participation has been provided for, either by the State/Tribe or by EPA.

Comment:

The TMDL was public noticed from February 21, 2005 to March 21, 2005. The stakeholder meeting was held to provide an overview of the draft TMDL and provide an opportunity for public comments. The stakeholder meeting took place on March 10, 2005, at the Indian Creek Elementary School Cafeteria, located at 200 W. Pearl Street in Trafalgar, Indiana. The presentation for the public meeting was included in the final TMDL submittal. Copies of the draft TMDL were posted on the IDEM's Web site at: <http://www.in.gov/idem/water/planbr/wqs/tmdl/finaldraft/indian/draftindcrktmdl.doc>. U.S. EPA sent in comments to the draft TMDL and they were adequately addressed in the final TMDL. There were three comments received and adequately addressed.

EPA finds that the TMDL submittal from Indiana satisfies all requirements concerning this eleventh element.

12. Submittal Letter

A submittal letter should be included with the TMDL submittal, and should specify whether the TMDL is being submitted for a *technical review* or *final review and approval*. Each final TMDL submitted to EPA should be accompanied by a submittal letter that explicitly states that the submittal is a final TMDL submitted under Section 303(d) of the Clean Water Act for EPA review and approval. This clearly establishes the State's/Tribe's intent to submit, and EPA's duty to review, the TMDL under the statute. The submittal letter, whether for technical review

or final review and approval, should contain such identifying information as the name and location of the waterbody, and the pollutant(s) of concern.

Comment:

EPA received the Indian Creek Watershed TMDL on June 1, 2005, accompanied by a submittal letter dated May 25, 2005. In the submittal letter, IDEM stated "the Final TMDL submission for the State of Indiana for the Indian Creek Watershed 303 ID # 120". Twenty-five segments are listed in the submittal letter. The Indian Creek Watershed is impaired for Recreational Use on Indiana's 303(d) list due to *E. coli*.

EPA is approving TMDLs for the Indian Creek Watershed for some segments that were not on Indiana's 303(d) list. While developing the Indian Creek TMDL project, IDEM determined that the additional segments Goose Creek, Barnes Creek, Crooked Creek, Oliver Creek, and Pike Creek were not listed but also impaired for *E. coli*. These segments were clearly identified in the draft TMDL (dated December 2004). The public had the opportunity to comment on the TMDLs including these additional impaired segments, during the IDEM public comment period. (These segments will be listed in the 2006 303(d) list based on the sampling completed in 2001, however, as these segments are part of this TMDL, the segments will be listed in Category 4 as part of a completed TMDL.) These are the same segments discussed in the final TMDL submitted to EPA. The TMDL report discusses the impairment for the segments and IDEM determined the TMDL target concentration, based on Indiana water quality standards, for all segments.

EPA believes it was reasonable for IDEM to develop TMDLs for the previously unlisted segments in the watershed at the same time it was developing TMDLs for the listed segments. Because the public has had the opportunity to comment on the decision to include these additional segments within the TMDL, as well as the target concentration based on Indiana's water quality standard, and because IDEM's public notice for these TMDLs and its transmittal letter of the final TMDL states that the TMDL report is for the Indian Creek Watershed, EPA believes it is appropriate to approve all twenty-five submitted TMDLs at this time.

13. Conclusion

After a full and complete review, EPA finds that the IDEM submittal determines standard - based concentrations for a total of 25 TMDLs for Indian Creek, Morgan and Johnson Counties, Indiana. The allocations satisfy all of the elements of an approvable TMDL. This approval concerns the waterbody segments and impairments set forth in the Table below, also shown on page 2 of this document. Impairments addressed in these TMDLs are pathogens from the pollutant *E. coli*.

Waterbody Name	303(d) List ID	Segment ID Number(s)	Length (miles)	Impairment
Indian Creek	120	INW01H1_T1097, INW01H2_T1098, INW01H3_T1099, INW01H4_T1100, INW01H5_T1101, INW01H6_T1102, INW01H7_T1103, INW01H1_1099	26.69	<i>E. coli</i>
Bear Creek	120	INW01H3_T1098	3.82	<i>E. coli</i>
Robertson Creek	120	INW01H6_T1101	10.51	<i>E. coli</i>
Camp Creek	120	INW01H5_00	7.06	<i>E. coli</i>
Sand Creek	120	INW01H7_00	6.60	<i>E. coli</i>
Oliver Creek, Crooked Creek, Pike Creek	130	INW01H4_00, INW04H4_T1101, INW01H4_1102	32.10	<i>E. coli</i>
Barnes Creek, Goose Creek	120	INW01H2_00	33.88	<i>E. coli</i>
Lick Creek and Unnamed Tributaries	120	INW01H1_T1096	3.60	<i>E. coli</i>
Long Run Creek	120	INW01H3_T1097	7.29	<i>E. coli</i>
Indian Trace Creek	120	INW01H5_T1102	10.79	<i>E. coli</i>
Sartor Ditch	120	INW01H7_00	3.40	<i>E. coli</i>
Sedwick Ditch	120	INW01H5_T1103	6.03	<i>E. coli</i>
Unnamed Tributaries	130	INW01H6_T1103, INW01H1_T1098, INW01H3_T1096, INW01H7_1101	15.61	<i>E. coli</i>

