



1 December 2020

Sina Parks
Montgomery County SWCD
2036 E Lebanon Road
Crawfordsville, Indiana 47933

Dear Sina:

Over the past month, we initiated continued collected macroinvertebrate samples. More details will be provided as we continue to identify individuals, calculate mIBI scores and, in concert with water chemistry and habitat data, work to determine what these scores mean for the Walnut Fork-Sugar Creek Watershed.

Additionally, we completed non-point source modeling using the STEPL model to assess the nonpoint source pollution of four of the pollutants of concern: total nitrogen, total phosphorus, total suspended solids, and E. coli. STEPL provides a basis for comparison of runoff for these pollutants within each subwatershed. In total, 189,902 pounds of phosphorus, 749,503 lb of nitrogen, 31,861 tons of sediment and 17,098 billion colonies of E. coli loading occurs in the Walnut Fork-Sugar Creek Watershed annually. Based on STEPL results, the Headwater Walnut Fork (Subwatershed 12) contains the highest loading rates for nitrogen, phosphorus, and E. coli. Headwaters Little Sugar Creek (Subwatershed 1) contains the highest sediment loading rate and the second highest nitrogen and phosphorus loading rates, while the unnamed tributary to Walnut Fork Sugar Creek at US 136 (Subwatershed 10). Overall, Walnut Fork-Sugar Creek loads higher volumes of nitrogen, phosphorus, sediment and E. coli to the watershed than the Little Sugar Creek drainage. The following maps detail STEPL results for each parameter.

Over the next month, we will complete macroinvertebrate sample sorting and identification; compile all of our collected data; and develop a set of recommendations which the Montgomery and Boone County SWCDs can use to apply for LARE Watershed Land Treatment funds for the January 2021 application.

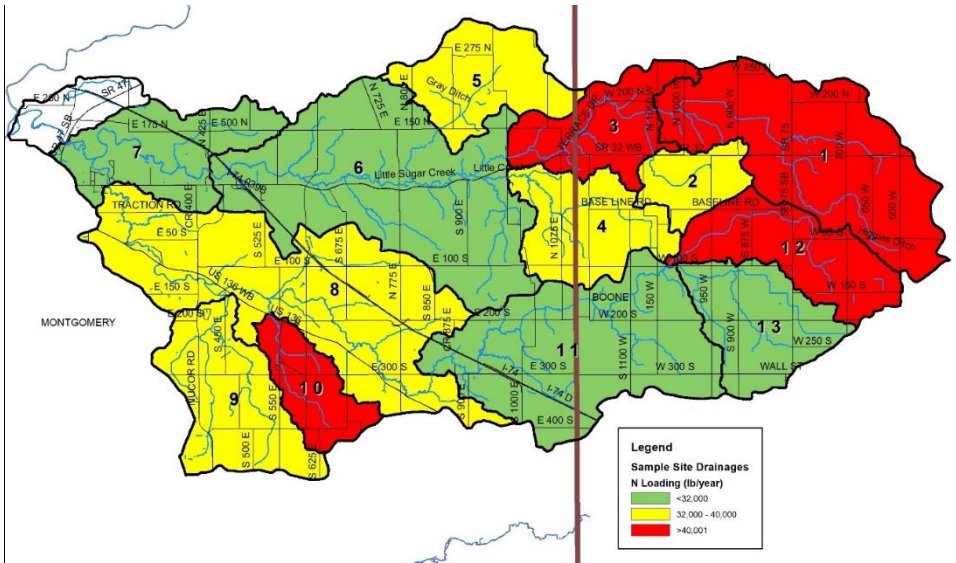


1610 N. Auburn Street
Speedway, IN 46224

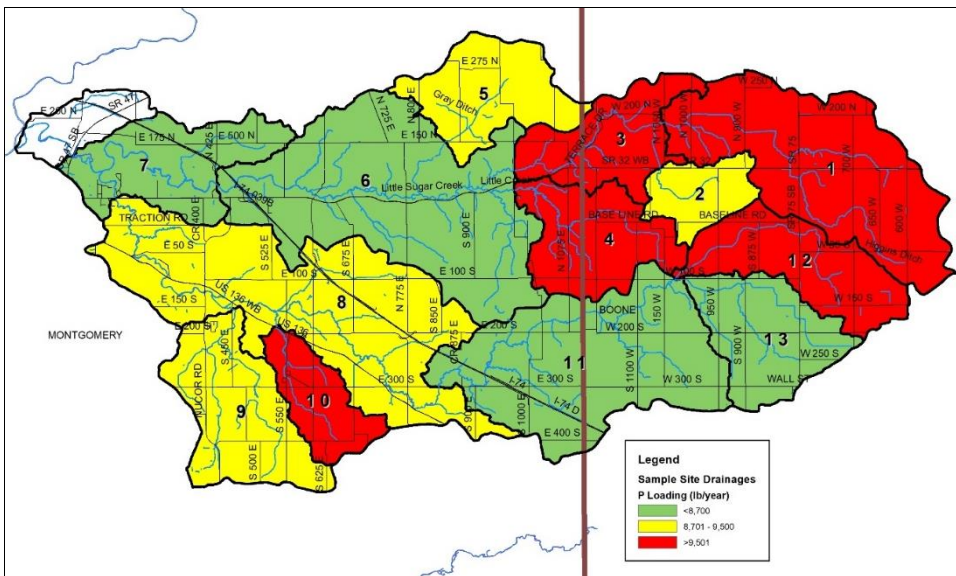
Phone (765) 337-9100
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Total nitrogen loading estimate using STEPL.



Total phosphorus loading estimate STEPL.

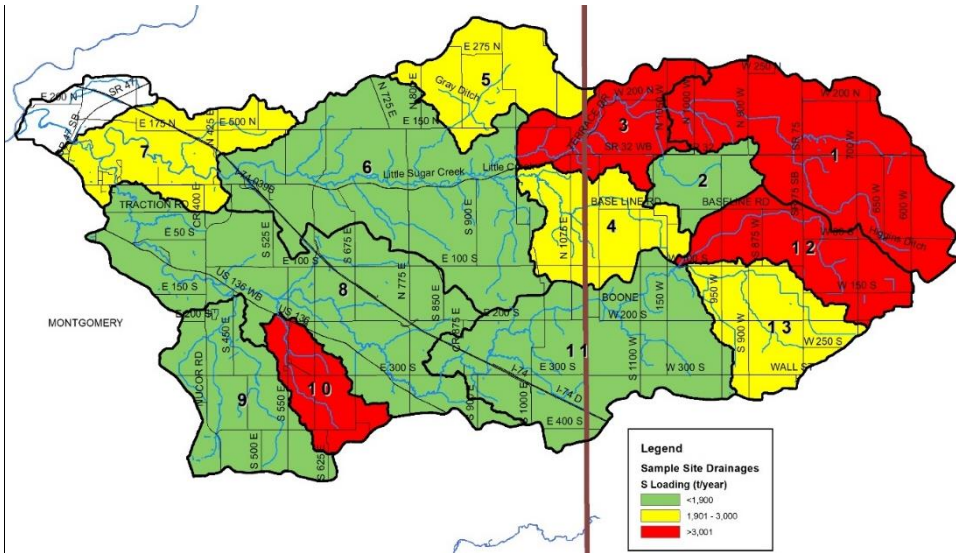


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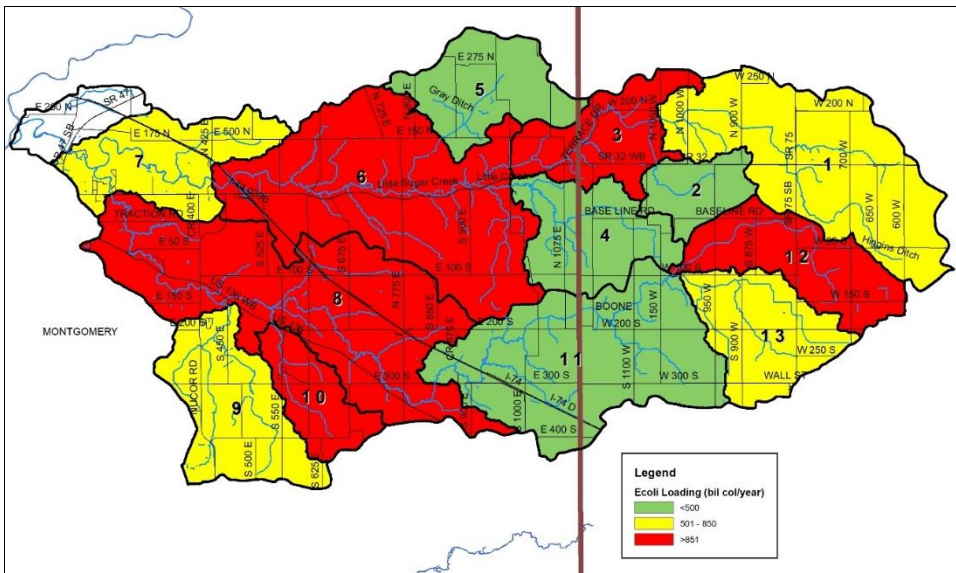
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Total suspended sediments loading estimate using STEPL.



E. coli loading estimate using STEPL.

Documentation of in-kind services: The Montgomery SWCD is reviewing water quality data and deployed the press release and the survey.

Sincerely,



Sara Peel, CLM



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