UPPER SUGAR CREEK WATERSHED MANAGEMENT PLAN
BOONE, CLINTON, MONTGOMERY AND TIPPECANOE COUNTIES, INDIANA

1.0 WATERSHED INTRODUCTION

1.1 Watershed Community Initiative

A watershed is the land area that drains to a common point, such as a location on a river. All of the water that falls on a watershed will move across the landscape collecting in low spots and drainageways until it moves into the waterbody of choice. All activities that take place in a watershed can impact the water quality of the river that drains it. What we do on the land, such as constructing new buildings, fertilizing lawns, or growing crops, affects the water and the ecosystem that lives in it. A healthy watershed is vital for a healthy river, and a healthy river can enhance the community and helps maintain a healthy local economy. Watershed planning is especially important in that it will help communities and individuals determine how best to preserve water functions, prevent water quality impairment, and produce long-term economic, environmental, and political health.

The Upper Sugar Creek Watershed starts downstream of the Browns Wonder-Sugar Creek Watershed receiving water from Prairie Creek, Walnut Fork-Sugar Creek and Lye Creek in addition to drainage from the Browns Wonder-Sugar Creek Watershed. In total, the Upper Sugar Creek Watershed drains 508 square miles of which 319 square miles will be address in this watershed management plan. The watershed includes drainage from Lebanon, Darlington, Colfax and Thorntown. The watershed includes three 10-digit hydrologic unit codes (HUCs): 0512011002 (Lye Creek), 0512011003 (Walnut Fork-Sugar Creek) and 0512011004 (Prairie Creek-Sugar Creek). The Upper Sugar Creek Watershed is comprised of three major basins: Prairie Creek draining north and west from the City of Lebanon, Walnut Fork-Sugar Creek draining west along the southern portion of the watershed and Lye Creek draining the north and eastern portion of the watershed. Lye Creek, Prairie Creek and Walnut Fork-Sugar Creek and other tributaries join Sugar Creek upstream of Crawfordsville. Sugar Creek continues south and west through Montgomery, Fountain and Parke Counties where it meets the Wabash River north of Montezuma. The Wabash River flows south to join with the Ohio River (Figure 1).

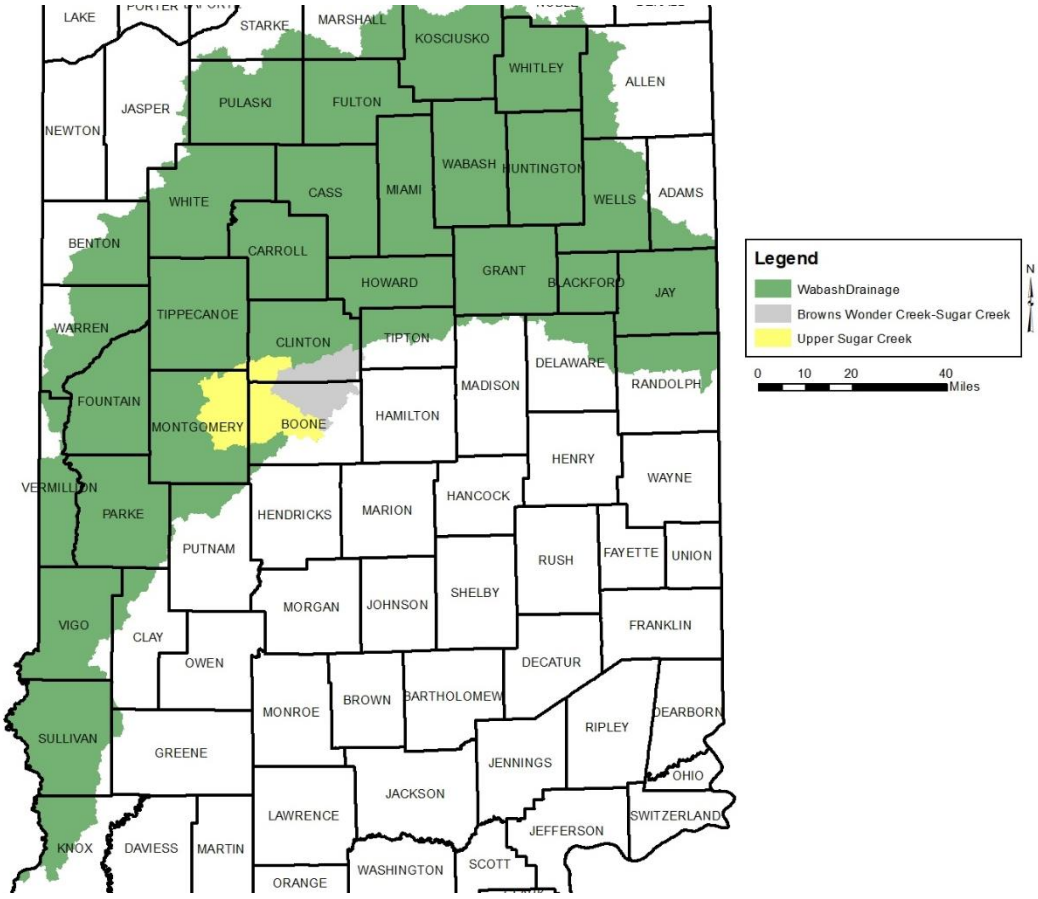

Figure 1. The Wabash River Basin highlighting the Upper Sugar Creek Watershed.

1.2 Project History

The Upper Sugar Creek Project launched in late 2021 as a result from a Section 319 grant awarded to develop the Upper Sugar Creek Watershed Management Plan. The Upper Sugar Creek Watershed includes all of the City of Lebanon and Towns of Colfax, Thorntown and Darlington. The watershed includes a variety of land uses including agricultural, forest and natural areas, including nature preserves and national forest, as well as urban and urbanizing land uses. Much of the watershed is dominated by agricultural land use with intact forested riparian areas especially adjacent to the mainstem of Sugar Creek. One exception is the predominantly urban and urbanizing drainages in the Priarie Creek headwaters (Sanitary Ditch-Prairie Creek and Deer Creek-Prairie Creek. The mix of land uses generate nutrient, sediment and pathogen runoff concerns. Stakeholders also identified the need to maintain high quality habitat and aesthetic conditions that leads Sugar Creek to be a recreation destination.

Based on these concerns, the Montgomery County SWCD approached community groups and individuals throughout the watershed that might be interested in working with them to assess and improve water quality within Upper Sugar Creek Creek and its tributaries. Identified potential stakeholders include: Boone, Clinton and Tippecanoe County SWCD and NRCS staff; City of Lebanon MS4s; Indiana DNR; Indiana State Department of Agriculture; Boone, Clinton, Montgomery and Tippecanoe County surveyors, parks departments, health departments and Purdue Extension; The Nature Conservancy; Wabash College faculty, students and staff; Friends of Sugar Creek, NICHES Land Trust; local landowners, educators and more.. This group formed a Steering Committee (Table 1),

conducted windshield surveys of the watershed, and held several meetings open to the public in order to generate input in the development of a watershed management plan for Upper Sugar Creek Watershed.

1.3 Stakeholder Involvement

Development of a watershed management plan requires input from interested citizens, local government leaders, and water resource professionals. These individuals are required to not only buy into the project and the process but must also become an integral part of identifying the solution(s) which will result in improved water quality. The Upper Sugar Creek Project involved stakeholders in the watershed management planning process through a series of public meetings and education and outreach events including windshield surveys, workshops, field days and youth-focused education events.

1.3.1 Steering Committee

Individuals representing the towns and counties within the watershed, environmental groups, natural resource professionals, agricultural and commercial representatives, and private citizens comprised the steering committee. The steering committee has met quarterly to develop the WMP starting in January 2022. Table 1 identifies the steering committee members and their affiliation.

Table 1. Upper Creek Watershed steering committee members and their affiliation.

Individual	Organization(s) Represented
Brian Daggy and Sheryl Vaughn	Boone SWCD
Sina Parks	Ceres
Scott Calvert	City of Lebanon MS4
Daniel Sheets	Clinton Surveyor
Leah Harden	Clinton SWCD
David Hadley, Cindy Woodall, Mark Elrod	Friends of Sugar Creek
Josh Brosmer	Indiana Department of Environmental Management
Sarah Gordon	Indiana American Water
George Reger and Matt Williams	Indiana State Department of Agriculture
John Frey	Montgomery County
Amber Reed	Montgomery Health Department
Monica Wilhoit	Montgomery Purdue Extension
Tom Cummins	Montgomery surveyor
Kristen Latzke and Megan Sweeney	Montgomery SWCD
Angie Garrison	NRCS
Chris Torp and Kenny Cain	Pheasants Forever
Adam Shanks	Purdue Extension - Clinton
Raoul Moore	Sugar Creek Advisory Board
Spencer Willem	Tippecanoe Surveyors office
Michelle Gilbert	Tippecanoe SWCD
Seth Harden	The Nature Conservancy
Chris Anderson	Wabash College

1.3.2 Public Meetings

Public participation is necessary for the long-term success of any watershed planning and subsequent implementation effort. One component of public participation for this project was public meetings and listening sessions. Due to the pandemic, a series of listening sessions were swapped for the in person public meeting to start the project. These sessions occurred in February 2021 and were used to introduce the project, develop a concerns list and allow individuals to provide their thoughts on potential projects that will be targeted in future implementation efforts. The purpose of the public meetings was to provide information on the overall planning effort and its progress; solicit stakeholder input, opinions, and participation; create opportunities for the public to recommend programs, policies, and projects to improve water quality; and build support for future phases of the project.

The public meetings/listening sessions were advertised through press releases distributed to local newspapers in the watershed and via the project website and emails sent to local landowners and conservation partners. The meetings/listening sessions were also advertised through word of mouth as staff from the Soil and Water Conservation District put together mailings that advertised the events.

The first public meeting is scheduled to occur on March 16, 2022 and will be hosted in part by the Wabash College Discourse and Diversity. Additional details about the meeting will be included in the second draft of the Upper Sugar Creek watershed plan.

The second meeting will occur in year two of the project and included an update on the status of the project and focused on gathering feedback on critical areas, practices selected for implementation and the likelihood of meeting project goals gathered.

1.4 Public Input

Throughout the planning process, project stakeholders, the steering committee, and the general public listed concerns for the Upper Sugar Creek Watershed including Sugar Creek, its tributaries, and its watershed. Public and committee meetings were the primary mechanism of soliciting individual concerns. All comments were recorded and included as part of the concern documentation and prioritization process. Concerns voiced throughout the process are listed in Table 2. Similar stakeholder concerns were grouped roughly by topic and condensed by the committee. The order of concern listing does not reflect any prioritization by watershed stakeholders.

Table 2. Stakeholder concerns identified during public input sessions, steering committee meetings and via the watershed inventory process. Note: The order of concern listing does not reflect any prioritization by watershed stakeholders.

Stakeholder Concerns
Trash accumulation
Elevated sediment and nutrient levels
Keeping the creek healthy (fish community)
Provide opportunities to access sugar creek
Sugar Creek provides good habitat and aesthetics – it should be protected
Water quality is poor
Soil erosion and nutrient loss
Streambank erosion
Protect and improve habitat

Fish community is declining
Prairie Creek at/along CR 250 N/Hazelrig Road – erosion, poor water quality
Need to engage agricultural landowners
Maintenance of regulated drains needed
Drinking water protection (Indiana American Water)/source water