

### #3(a) Revised Scope of Work

The Brown County Regional Sewer District (BCRSD) is seeking a grant to fund a wastewater strategic management plan. BCRSD will undertake an engineering evaluation of existing onsite septic treatment systems and study the technical and economic feasibility of regional wastewater collection and treatment options throughout Brown County. Brown County currently has three existing municipal wastewater sewer districts comprising of the Town of Nashville and the communities of Helmsburg and Gnaw Bone.

However, Brown County has many areas that are not currently served by sewers. Most areas are on individual septic systems, many of which may not be functioning adequately to serve individual homeowners or to protect public health and the environment. The BCRSD desires to study the source of E. coli contamination in streams and the options for improving wastewater management for residential homes and commercial operations throughout Brown County. The proposed project area includes all of Brown County not currently served by public sewers.

The scope of work for this project will encompass seven (7) major phases described as follows:

#### **Phase 1: Benchmarks**

- Investigate other Counties
- Identify Benchmarks and Metrics

#### **Phase 2: Internal Research:** Assess the proficiency of onsite sewage systems (OSS) throughout Brown County

- Interview key regulators and stakeholders
- Collect and review Brown County Health Department (BCHD) onsite septic system data
- Collect and review Indiana State Department of Health (ISDH) data
- Collect and review Indiana Department of Environmental Management (IDEM) water quality data
- Collect and review previous Watershed studies

#### **Phase 3: External Research:** Collect targeted data:

- Identify and collect additional environmental information
- Identify relevant Technology New to Indiana (TNI)
- **Perform source analysis for E. coli contamination**

#### ***1st Report - Key Findings***

#### **Phase 4: Analysis and Tracking**

- Leverage analytical tools
- Interpret Internal and External data
- Identify alternative onsite wastewater treatment technologies
- Identify community sewer opportunities congruent with ROI Housing Study
- Develop cost factors for evaluating wastewater infrastructure improvements and Brown County work force development

#### ***2nd Report - Detailed Analysis***

### **Phase 5: Strategic Planning**

- Build goals
- Prioritizing onsite improvements and community sewer services
- Categorize doable projects
- Build cost basis for project planning

### **Phase 6: Campaign Development**

- Develop communication media formats
- Create educational program
- Establish videos, social media, town hall forums

### ***3rd Report - Summation and Roll-out***

### **Phase 7: Roll out communication campaign**

- Develop roll-out strategy
- Build community support
- Incorporate homeowner financial assistance programs (ie: USDA Rural Development Repair Loans and Grants)

#9(a) Revised general timeline:

<u>Task</u>	<u>Timeline</u>
Submit Grant Application	April 15, 2019
Receive Grant Award	December 2019
Prepare RFP	January 2020
Submit RFP to select Engineering firms	Late January 2020
Receive RFPs	Late February 2020
Review and Evaluate RFP Submittals	March 2020
Award Engineering Study Contract	Late March 2020
Phase 1: Benchmarks	May 2020
Phase 2: Internal Research	Mid May - Mid June 2020
Phase 3: External Research	June - August 2020
1st Report	Mid August 2020
Phase 4: Analysis and Tracking	July - October 2020
2nd Report	Early November 2020
Phase 5: Strategic planning	November - December 2020
Phase 6: Campaign Development	December - January 2021
3rd Report	Late January 2021
Phase 7: Roll out Communication Campaign	February - April 2021

The revised project schedule reflects a new timeline based on current estimates of ROI Grant award and projected stream sampling and E. coli source analysis schedules.

#10(a) Revised Project Budget:

<u>Task</u>	<u>Budget</u>
Phase 1: Benchmarks	\$5,000.00
Phase 2: Internal Research	\$5,000.00
Phase 3: External Research	\$15,000.00
1st Report	\$1,000.00
Phase 4: Analysis and Tracking	\$35,000.00
2nd Report	\$1,000.00
Phase 5: Strategic planning	\$30,000.00
Phase 6: Campaign Development	\$15,000.00
3rd Report	\$1,000.00
Phase 7: Roll out Communication Campaign	\$10,000.00
Total Project Budget	\$118,000.00

Additional costs have been added for Phases 3 and 4. This cost increase is due to a material change in the cost for sample collection and analysis for E. coli differentiation. A minimum of 30 stream and lake samples will be analyzed for source identification to characterize E. coli contamination from human or various animal origin. Initially, the Indiana State Department of Health Environmental Laboratory had indicated an ability to perform E. coli source identification at low cost, but has not developed that capability. The higher cost for a third party laboratory is included.



#15(a) Revised budget and funding sources:

<b><u>Task</u></b>	<b><u>Budget</u></b>
Phase 1: Benchmarks	\$5,000.00
Phase 2: Internal Research	\$5,000.00
Phase 3: External Research	\$15,000.00
1st Report	\$1,000.00
Phase 4: Analysis and Tracking	\$35,000.00
2nd Report	\$1,000.00
Phase 5: Strategic planning	\$30,000.00
Phase 6: Campaign Development	\$15,000.00
3rd Report	\$1,000.00
Phase 7: Roll out Communication Campaign	\$10,000.00
Total Project Budget from ROI	\$118,000.00

The Indiana State Revolving Fund, Regionalization Assistance Programs (RAP) that was initially requested by the Brown County Regional Sewer District was not approved. Instead, SRF requested that both the BCRSD and the Helmsburg Regional Sewer District (HRSD) resubmit joint grant applications for a Regionalization Study to be conducted by a SRF consultant and managed by SRF staff. That project is underway and addresses only the regionalization feasibility and cost projections to combine the two sewer districts.

The original \$78,000.00 requested from ROI for the BCRSD Wastewater Strategic Management Plan project had anticipated that a \$30,000 additional grant from SRF would be used toward the countywide Wastewater Strategic Management Plan project. The RAP grant application was initially planned for all or parts of Phases 1, 2, 3 and 4 of the research through the 1st report. Those steps are now included in this revised ROI grant request. Additional sampling and analytical work is also included.

#16(a) Revised contributing organizations:

The Brown County Health Department (BCHD), acting under the direction of the Brown County Health Officer, is mandated to administer the requirements of Rule 410 IAC 6-8.3, Residential On-site Sewage Systems. In that capacity, the BCHD maintains records on the installation and repair of residential septic systems. Recorded information includes the age of septic systems, soil characteristics, depth of trenches for lateral fields, and depth to groundwater. All of these parameters are critical to assure that septic systems are providing adequate treatment of residential sewage prior to the wastewater entering the natural environment. The BCHD will provide information on the completeness of individual septic records, or the lack thereof, and will provide ongoing support to categorize local conditions.

Numerous local residents have already volunteered to assist in the collection of surface water samples from area lakes and creeks and streams. Through IU's School of Public and Environmental Affairs, students studying environmental sciences will be encouraged to assist in water sampling, data collection, and analysis activities. As needed, volunteer training will be provided by Hoosier Riverwatch members.

The Indiana State Department of Health (ISDH) Environmental Laboratory will perform initial analysis of water samples for investigation of E. coli levels and other chemical compounds directly related to human activity. Initially, the ISDH Environmental Lab was thought to have the analytical capability to differentiate the source of E. coli from human versus animal origin. ISDH Lab will perform baseline E. coli analysis, but has not developed the capability to determine origin. Therefore, this revised application has identified additional time and costs to utilize a third party laboratory experienced in determining the origin of E. coli in water samples. As baseline sampling results dictate, additional samples will be collected to perform forensic analysis for the source of E. coli.

## #19(a) Advancing community and economic prosperity in the region

"The county needs a comprehensive assessment that includes health statistics related to private septic systems, outlines the benefits of consolidating Brown's three regional sewer districts, and provides options and recommendations for wastewater infrastructure improvement projects that would enable the county to strategically manage residential growth and understand the return on investment associated with property values." - Quality of Place and Workforce Attraction Plan dated February 2019.

Brown County's natural environment is a major asset for residents and visitors alike. But that natural beauty also creates limitations for development and new construction. Thin soils and steep hillsides do not promote easy development. Understanding how to manage wastewater, particularly with community-wide sewer systems, or improved onsite technologies will allow residential and commercial growth in areas that have been geographically challenged in the past. Managed neighborhoods with smaller lot sizes and more dense housing on smaller land areas, such as apartment buildings, create less impact on the environment.

The beauty and recreational usage of the natural environment is essential for locals and tourists alike. Tourism is the biggest single economic driver to Brown County's future. Tourism in 2017 produced \$42.7 million in economic value in Brown County. Economic prosperity in Brown County will always be linked to a healthy environment to live, work, and play.

The recently completed *Brown County Economic Development Plan*, August 2019, by Thomas P. Miller & Associates states "The most frequently cited concern from community engagement was the state of Brown County's wastewater treatment systems. Concerns included suspected under regulated septic tanks..." Several key portions of that document are attached for reference. This study and comprehensive plan was sanctioned by the Brown County Redevelopment Commission. This wastewater strategic management plan will address the exact infrastructure issue identified in the *Economic Development Plan* and will produce the data and subsequent action plans necessary to implement corrective actions.

Beyond Brown County's border (downstream) lies Monroe County and Lake Monroe. As stated in Monroe's *Quality of Place* study, the number three reason for its residents to stay is access to outdoor recreation and the enjoyment of Monroe County's own natural beauty. 6,648 jobs are directly or indirectly attributed to outdoor recreation. As Brown County better understands how to improve wastewater management and positively impact our surface waters, both Brown and Monroe will experience job creation associated with outdoor recreation in the parks and forests, along the streams and creeks, and on the numerous small lakes to Indiana's largest man-made Lake Monroe.



#### #20(a) Project integration and support:

A Brown County wastewater management strategic plan is the first link in the chain to develop affordable housing. Monroe County recognized this concern in their own Quality of Place study. Monroe's Tier 1 Priority is to increase affordable housing supply by first revising county policies on water and sewer line extensions in the county. Monroe also stated the need to build communities around existing, unused water and sewer infrastructure. This BCRSD project will provide planning data, including cost analysis for additional community sewer systems in Brown County to complement existing sewage collection and treatment systems in Helmsburg, Nashville, Graw Bone and the proposed Bean Blossom Regional Wastewater Treatment facility. This major Brown County planning effort will ultimately support development in down-watershed counties, most directly Monroe County. As the Monroe Quality of Place study clearly states, "infrastructure drives development".

The city of Bloomington has also recognized the critical need to determine environmental issues surrounding their major drinking water source = Lake Monroe. The 10,750 acre lake serves as the primary water source for over 100,000 people. Through efforts of the Friends of Lake Monroe (FLM), a CWA Section 319 grant has been granted by the State of Indiana to develop a Watershed Management Plan. It is understood that 56% of Lake Monroe's watershed is represented in Brown County.

Lawrence County also identified that their top three Initiatives relate to improving recreational opportunities and enhancements to their existing park system. By seeking to improve Brown's soil and water quality, sustainable downstream environmental impact will support both Monroe and Lawrence efforts to improve quality of place and enhance the natural environment.



#### #25(a) Requirements to ensure success:

Cooperative partnerships with local and state governmental agencies and non-governmental organizations will ensure the success of this project:

##### Brown County Commissioners:

Leadership support is critical for the development and implementation of a countywide comprehensive wastewater strategic plan from Brown County's primary governmental agency. Regulatory revisions, if identified, and political will to manage difficult cultural and economic issues will be required. In the attached letter dated November 20, 2019, the Brown County Commissioners stated very clear and succinct support of the vital project. Together with the Brown County Council, the elected and appointed officials are working hard to build sustainable growth in Brown County and address infrastructure needs.

##### Indiana State Department of Health:

Alternative technologies for cost-effective onsite wastewater management, including technologies new to Indiana (TNI), may be identified in this project. Cooperative review and prompt approval of alternative collection and treatment systems will provide needed support for project implementation. In addition, the ISDH Environmental Laboratory will perform a key role in water analysis and data production.

##### Indiana Department of Environmental Management:

IDEM permitting support for alternative solutions approved by ISDH, such as cluster collection and small-scale wastewater treatment technologies, may be needed. As an integral member of the project team, technical support by IDEM staff will also assist in identifying sampling and analytical protocols, allowable standards for water quality, and environmental impact.

##### Brown County Health Department:

The Brown County Health Department is crucial link in understanding the condition of residential onsite wastewater management systems. The BCHD administers permitting and inspection for new installations and repairs to existing systems. BCHD staff provides technical expertise for local, site specific issues and maintains ongoing recordkeeping for wastewater management in the county. Providing existing data and continuing to develop new information on the condition of onsite wastewater management systems will be needed for the success of preparation of a comprehensive strategic plan.

##### Local volunteers:

Collection of water samples, under management by the BCHD, will continue to be accomplished by volunteers from the Brown County area.

The BCRSD and the Brown County League of Women Voters, in partnership with the Purdue Extension Service, the Brown County Health Department, the Soil and Water Conservation District and others hosted a "community conversation" titled the *Septic Summit* in September to introduce local residents (over 120 area residents attended) to onsite wastewater (septic) management issues.