\*Refer to the 2020 Grant Guidance document and the Application Instructions for instructions on completing this application.

1. Project Title: \_\_\_\_Lower Pitman Creek Watershed Plan\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | 2. Lead Agency & Primary Contact |  | 3. Project Manager |
| Name |  | Alan Keck |  | Reggie Chaney |
| Agency |  | City of Somerset |  | City of Somerset |
| Street Address |  | 306 E. Mt. Vernon |  | 306 E. Mt. Vernon |
| City |  | Somerset |  | Somerset |
| State |  | KY |  | KY |
| Zip |  | 42501 |  | 42501 |
| Telephone Number |  | 606-425-5310 |  | 606-679-6366 |
| Fax Number |  |  |  |  |
| Email Address |  | akeck@cityofsomerset.com |  | rchaney@cityofsomerset.com |

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| 4. Project Start Date: | 07/2020 | 5. Project End Date:  | 09\*30/2024 |

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| --- | --- | --- |
| 6. Fiscal Summary |  | 7. Type of Project |
| 319 Funding | 150,000 | 60% |  | [x]  | Watershed Plan |
| Non-Federal Match | 100,000 | 40% |  | [ ]  | WSP Implementation |
| Total Budget | 250,000 | 100% |  | [ ]  | BMP Technology Demonstration |
|  |  |  |  | [ ]  | Education/Outreach Technology Transfer |
|  |  |  |  | [ ]  | Other: |

|  |  |  |  |  |  |  |
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| 8. River Basin |  |  |  |  |  |  |
| [ ]  | Statewide | [ ]  | Tygarts | [ ]  | Ohio Tributary | [ ]  | Little Sandy |
| [ ]  | Kentucky | [ ]  | Green | [ ]  | Lower Cumberland | [ ]  | Mississippi |
| [ ]  | Salt | [ ]  | Tradewater | [x]  | Upper Cumberland |  |  |
| [ ]  | Licking | [ ]  | Tennessee | [ ]  | Big Sandy |  |  |

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| --- | --- | --- |
| 9. Geographic Coverage |  | 10. NPS Pollutant(s) to be addressed |
| [ ]  | Statewide |  | [ ]  | Low Dissolved Oxygen | [ ]  | Pesticides |
| [ ]  | Regional |  | [ ]  | Sedimentation/Siltation | [ ]  | Oil and Grease |
| [x]  | Watershed |  | [ ]  | Suspended Solids | [ ]  | Nutrients |
|  |  |  | [x]  | Pathogens/Bacteria | [ ]  | pH |
|  |  |  | [ ]  | Organic Enrichment |  |  |
|  |  |  | [ ]  | Other: |  |  |

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| 11. Nonpoint Pollution Source(s) to be addressed. Select up to five sources and include the percentage to which the project addresses the source. Total must equal 100%. |
| Percent |  | Percent |  |
| 100 | NPS All |  | Resource Extraction |
|  | Agriculture |  | Habitat Modification |
|  | Construction |  | Improper Waste Disposal (including onsite Waste Issues) |
|  | Silviculture |  | Hydrologic Modification |
|  | Urban Runoff |  | Recreation |
|  |  |  | Other: |
|  |  |  |  |

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| --- | --- | --- |
| 12. Project Area | Yes | No |
| Project deals directly with groundwater, springs or karst? | [x]  | [ ]  |
| Watershed Projects Only, Complete the following: |  |  |
|  | Project Implements a TMDL | [ ]  | [ ]  |
|  | Project address a TMDL that is under development | [ ]  | [ ]  |
|  | Project is on the 2016 Integrated Report, Assessment Category 5A | [ ]  | [ ]  |
|  | Nonsupport Stream | [ ]  | [ ]  |
|  | Partial Support Stream | [x]  | [ ]  |
|  | Project is on a Special Use Water with identified threat. | [ ]  | [ ]  |
|  | Project has other impairments or identified treats (describe in app.) | [x]  | [ ]  |

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| 13. Location |  |  | Map Attached: Yes[ ]  N/A[ ]  |
| Watershed Name | HUC# | County1 | County2 | Drainage Area |
| Lower Pitman Creek | 051301030204 | Pulaski | USA | 50 sq. miles |
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14. Project Summary (Two page limit):

The Lower Pitman Creek Watershed encompasses approximately 50 squares miles of densely urban and rural lands. The majority of Somerset City limits are encompassed inside this watershed. The watershed discharges into the upper end of Lake Cumberland. Back in 2012, a section of Pitman Creek was monitored and assessed. Results exhibited readings of *E.coli* in the creek, indicating that this section of the creek only partially supports swimming. The City of Somerset would like to investigate this further and create a plan to reduce pollutants in its waterways. The development of a detailed watershed plan will identify what pollutants are present and determine where they are manifesting throughout the watershed, help decrease sediment and stormwater runoff into waterways and major sinkholes, improve stream habitat to promote a healthy aquatic ecosystem, and increase public awareness of the impacts of development on runoff quantity and quality.

The watershed plan will identify what bacteria, focusing on *E.coli* and Fecal Coliforms, are present in the watershed and where they are manifested. The results of the monitoring phase will dictate what BMP will be needed. One possible objective of the plan is to educate and encourage the public on proper maintenance of septic system and reduce bacteria by identifying areas with failing septic systems. The plan will also identify areas, if any, of public sewer systems in need of repair or replacement.

The plan will decrease sediment and stormwater runoff to waterways and major sinkholes within the watershed through redefining and reestablishing natural channels, implementing green infrastructure and reducing impervious surfaces. Simultaneously, the plan will improve the stream habitat to promote a flourishing and healthy aquatic ecosystem. This will be achieved by expanding riparian buffer areas, stabilizing eroding stream banks and routine trash clean up.

To maximize the efforts of the watershed plan, public awareness will be a focus. A local watershed planning committee will be established to help drive the plan. Throughout the area, educational programs and outreach will be implemented to inform the public on the impacts of development and/or land use on runoff quantity and quality.

15. Introduction/Background (Two page limit):

The Lower Pitman Creek watershed collect runoff from the majority of the City of Somerset, City of Ferguson, and several small agricultural communities nearby. The watershed discharges directly into Lake Cumberland, near the beginning of the lake. Lake Cumberland, ranked the 9th largest reservoir in the U.S. by size. attracts millions of visitors each year. The lake is a major source of tourism and an economic engine for the City of Somerset and the surrounding rural communities.

In addition to its economic impact on the area, Lake Cumberland is the main source of water for tens of thousands of people. The City of Somerset’s water treatment plant pulls water from the lake close to where Pitman Creek enters the lake. Somerset and residents of Pulaski County are extremely fortunate to have Lake Cumberland at its back door to supply its citizens with fresh water. Additionally, five other water utilities also use Lake Cumberland as their main source of water, further reinforcing the importance of the quality of the lake’s water.

In 2012, Lake Cumberland was assessed for pollutants. The results indicated that the lake fully supports aquatic life, fishing, wading and boating, and drinking water. However, the findings indicated partial supports for fish consumption due to methylmercury, likely due to atmospheric deposition. The importance of Lake Cumberland to the local and regional area cannot be understated. While the Lower Pitman Creek Watershed is a small piece of a greater watershed that drains to Lake Cumberland, it plays a vital role in the overall condition of the lake. This watershed plan is the first plan completed by a community located directly on the lake. One of the overarching goals is to create awareness at the local level of how each individual impacts the water quality of the waterways and ultimately the lifeline of the area, Lake Cumberland. The City of Somerset prides itself on being a proactive community and a leader to surrounding communities. This watershed plan would be another example of how Somerset is setting the standard for the region. As a side effect of the watershed plan, surrounding regional communities will see the impact that they are having on Lake Cumberland.

16. NPS Pollution Control Project Goal, Objectives, and Activities:

Goal #1: Identify and decrease bacteria, in particular *E.coli* and fecal coliforms, levels within the watershed to allow safe recreational use

 Objective: Establish which sub-watershed are major contributor of bacteria

 Activities: 1. Divide the watershed into sub-watersheds and sample each one.

2. Using the data, prioritize which sub-watershed is the greatest contributor of bacteria

Objective: Reduce *E.coli* and fecal coliforms through the elimination of failing septic tanks

 Activities: 1. Gather data on Pitman Creek and Sinking Creek

2. Encourage public awareness of effects of failing septic tanks

 3. Septic tank repair pilot program

Goal #2: Decrease sediment and stormwater runoff to waterways and major sinkholes within the watershed

 Objective: Restore natural stream channel and drainage swales

 Objective: Implementing Green Infrastructure

 Objective: Reduce Impervious Pavement

 Objective: Conduct a groundwater study of the heavy karst topography

Goal #3: Improve the stream habitat to promote a flourishing and healthy aquatic ecosystem

 Objective: Expand riparian buffer zones

Objective: Stabilize eroding stream banks

 Activities: 1. Organize bi-annual trash pick-up day

Goal #4: Increase Public involvement

 Objective: Create a local watershed planning committee

Activities: 1. Advertise in the local paper regarding the formation of a watershed committee

2. Collect public thoughts and concerns regarding the current status of the watershed

 Objective: Educate the public on the impact of development and land use on runoff quantity and quality

17. Describe the NPS Pollution Control Plan of Work:

A study in 2012 indicated that a section of Pitman Creek contains E.coli bacteria. Outside of this assessment, there is little to no data available on the condition of the remaining waterways within the Lower Pitman Creek Watershed. Currently it is not practical to establish a pollution control plan without knowing what kind of pathogens are in the waterway and where they originate. The City of Somerset will use the data assessed during the monitoring phase of the watershed plan to shape how it tackles each pollutant. Consequently, the data will drive which BMP are selected and where they will be the most effective.

 18. Environmental Data Collection:

The City of Somerset plans to work with the Kentucky Division of Water - Water Quality conduct the data collection for stream assessments. Since the DOW will be writing the project study plan and collecting the data, the DOW Quality Assurance Project Plan will be used.

19. Public Involvement:

The City of Somerset plans to work with the Upper Cumberland Basin Coordinator to help encourage public participation throughout the watershed plan development. The City of Somerset also plans to hire a local watershed coordinator. This individual will spearhead efforts such as schedule various public meetings, organize and attend outreach programs and manage public input.

20. Project Partners: *Letters of participation are required from all partners (see 2020 Grant Guidance Document). Attach letters of participation as an appendix to this application.*

Currently, there are no active watershed groups within the Lower Pitman Creek Watershed. During the development of the Watershed Plan, Somerset hopes to bring various partners on board and create a network of organizations to push the implementation of the watershed plan. While the following organizations have not been approached as of now, Somerset hopes to partners with the Upper Cumberland Watershed Watch, the local Health Department, East Kentucky Pride, local schools and businesses.

21. Project Measures of Success:

The project success will be measured by establishing a baseline within the watershed of pollutants of concerns during the monitoring phase and identifying BMPs that will help reduce the pollutants. Currently there is no organization in the area to champion a watershed plan. The project will be considered a success if an established, independent Watershed Council is created.

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| --- | --- |
| 22. Milestone Schedule |  |
| Milestone | Date |
| Expected Begin | Expected Completion |
| Receipt of Grant Funding | June 2020 | September 2024 |
| Hire a watershed coordinator | June 2020 | December 2020 |
| Develop and complete a groundwater study | June 2020 | March 2021 |
| Build local working relationships, begin gathering community input, start planning community engagement, potentially host initial community information meeting | June 2020 | June 2021 |
| Develop a public involvement plan | June 2020 | June 2021 |
| Convene all project partners and establish watershed council | June 2020 | June 2021 |
| Conduct quarterly watershed council meetings | June 2021 | Duration |
| Submit advanced written notice to NPS Program staff for all educational public meetings, field days, workshops, etc. | Duration | Duration |
| Work with DOW to develop a Project Study Plan | January 2021 | March 2021 |
| DOW will begin monthly water quality monitoring for a total of 12 months. | March 2021 | March 2022 |
| Gather background information and compose Chapters 1-2 | December 2020 | June 2021 |
| Analyze and interpret historical data from previous water quality monitoring (KDOW) and compose Chapter 3 | June 2021 | December 2021 |
| Analyze and interpret new data from water quality monitoring and compose Chapter 4 | April 2023 | April 2024 |
| Hold community meetings to discuss the WSP, and water quality, and potential BMP solutions. | April 2023 | April 2024 |
| Develop (or edit from existing) and distribute handouts, online information, public service announcements as needed.  Submit to DOW NPS Program staff for review and approval. | Duration | Duration |
| Develop BMP Implementation Plan (Chapters 5 and 6) | April 2023 | April 2024 |
| Develop measurable milestones and evaluation criteria for determining the long-term success of watershed planning and implementation (Chapter 7) | April 2023 | April 2024 |
| Finalize WSP and submit to DOW for review | May 2024 | May 2024 |
| Develop and submit Final Report upon completion of the project | August 2024 | September 2024 |

23. Reference/Literature Cited:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 24. Budget Summary |  |  |  |  |  |  |
| Category | BMP Implementation | Project Management | Education, Training, or Outreach | Monitoring | Technical Assistance | Other | TotalAmount |
| Personnel |  | 50,000 |  | 50,000 |  |  | 100,000 |
| Supplies |  |  | 10,000 |  |  |  | 25,000 |
| Equipment |  |  |  |  |  |  |  |
| Travel |  |  |  |  |  |  |  |
| Contractual | 50,000 | 70,000 | 10,000 |  |  |  | 140,000 |
| Operating Costs |  |  |  |  |  |  |  |
| Other  |  |  |  |  |  |  |  |
| TOTAL | 50,000 | 120,000 | 30,000 | 50,000 |  |  | 250,000 |

|  |  |  |  |
| --- | --- | --- | --- |
| 25. Detailed Budget |  |  |  |
| Budget Categories(Itemize all Categories) | §319(h) (60% of funds) | Non-FederalMatch (40% of funds) | TOTAL |
| Personnel | 50,000 | 50,000 | 100,000 |
| Supplies |  | 10,000 | 10,000 |
| Equipment |  |  |  |
| Travel |  |  |  |
| Contractual | 100,000 | 40,000 | 140,000 |
| Operating Cost |  |  |  |
| Other |  |  |  |
| TOTAL | 150,000 | 100,000 | 250,000 |

26. Budget Narrative: Describe in detail the Federal and Non-Federal match for each of the following

 Budget Categories.

Personnel:

Federal- From the beginning of the planning phase, the City of Somerset plans to hire a stormwater coordinator. The funds in this category will cover salary.

Non-Federal match- The City of Somerset plans to conduct a groundwater study of its various underground conduits. The funds in this category will be used to hire Bell Engineering to conduct this plan. The area is widely known for its karst topography. Large areas of the watershed drain towards sinkholes. Once the water enters the sinkhole, it is unknown where the water travels below the surface. The plan will include dye testing and subsurface mapping of the underground conduits.

Supplies:

Federal- N/A

Non-Federal match- Funds in this category will be used to modify existing or create new educational brochures or pamphlets to distribute to the public. In addition, these funds will cover cost associated with any food or refreshments that may be provided at public meetings.

Equipment:

Federal- N/A

Non-Federal N/A

Travel:

Federal- N/A

Non-Federal N/A

Contractual:

Federal- Half of the funds in this category will be used to write the watershed plan. The City of Somerset plan to hire Bell Engineering to write the plan. The remaining half of the funds will be used to implement several BMPs that the watershed plan determines.

Non-Federal match- These funds will be used to write the watershed plan. The City of Somerset plan to hire Bell Engineering to write the plan.

Operating Costs:

Federal- N/A

Non-Federal N/A

Other:

Federal- N/A

Non-Federal N/A

27. Grant Application Conditions

Completion of this section is required in order to receive funding consideration.

* Applicant agrees that the proposed project will comply with all applicable state laws and rules [x] Yes[ ] N/A
* Applicant agrees to obtain all applicable permits. [x]  Yes [ ]  N/A
* Reporting will be conducted in accordance with the legal contract. [x]  Yes [ ]  N/A
* All Project Partners have agreed to participate. [x]  Yes [ ]  N/A

I have read and agree to comply with all applicable conditions as specified in the Application Instructions

* Watershed Plan Condition (See Section 27 , Page 15) [x]  Yes [ ]  N/A
* Required Training Condition (See Section 27, Page 15) [x]  Yes [ ]  N/A
* Education Materials Condition (See Section 27, Page 15) [x]  Yes [ ]  N/A
* Material Review Condition (See Section 27, Page 15) [x]  Yes [ ]  N/A
* Quality Assurance Condition (See Section 27, Page 15) [x]  Yes [ ]  N/A
* BMP Implementation Plan Condition (See Section 27, Page 16) [x]  Yes [ ]  N/A
* Onsite Wastewater Condition (See Section 27, Page 16) [x]  Yes [ ]  N/A
* AFO Condition (See Section 27, Page 16) [x]  Yes [ ]  N/A
* Stream Restoration Condition (See Section 27, Page 17) [x]  Yes [ ]  N/A
* GIS Condition (See Section 27, Page 17) [x]  Yes [ ]  N/A
* Annual Report Condition (See Section 27, Page 18) [x]  Yes [ ]  N/A
* Project Partners Condition (See Section 27, Page 18) [x]  Yes [ ]  N/A

WARNING: Any application which is determined to be deficient, not eligible or missing KEY components will not be considered for funding.

28. Application Signature:

I certify that the information contained in this document is complete and accurate to the best of my knowledge and agree to comply with all conditions of funding.

|  |  |  |
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|  |  |  |
| Signature of Lead Agency’s Authorized Representative |  | Date |
| Alan Keck, City of Somerset Mayor |  | 606-425-5310 |
| Typed Name and Title |  | Telephone Number |