

## **MEMORANDUM OF AGREEMENT**

**THIS MEMORANDUM OF AGREEMENT** (hereinafter “MOA”) is made and entered into as of the \_\_\_\_ day of \_\_\_\_\_, 2022, by and between the **LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT**, an urban county government of the Commonwealth of Kentucky pursuant to Chapter 67A of the Kentucky Revised Statutes, 200 East Main Street, Lexington, Kentucky 40507 (hereinafter “LFUCG”) and **BLUEGRASS COMMUNITY AND TECHNICAL COLLEGE**, whose office is located at 470 Cooper Drive, Lexington, Kentucky, 40506 (hereinafter “BCTC”).

### **WITNESSETH:**

**WHEREAS**, LFUCG has developed the Watershed-Focused Monitoring Program Quality Assurance Project Plan (“QAPP”) toward the stated goal of changing its monitoring program to a watershed-focused monitoring program; and

**WHEREAS**, LFUCG’s Watershed-Focused Monitoring Program QAPP requires data of sufficient quality and resolution to facilitate the identification and remediation of sources of recreational and aquatic habitat impairments to streams within the Urban Services Boundary; and

**WHEREAS**, LFUCG wishes to engage BCTC for services related to the implementation of the Watershed-Focused Monitoring Program QAPP relating to the North Elkhorn Watershed, and

**WHEREAS**, BCTC’s Environmental Science Technology (EST) Program wishes to provide those services necessary to generate data and conduct monitoring related to the implementation of the Watershed-Focused Monitoring Program QAPP for the North Elkhorn Watershed,

**NOW, THEREFORE**, in consideration of the mutual promises and covenants set forth herein, the receipt and sufficiency of which are acknowledged, the parties hereby agree as follows:

#### **A. OBJECTIVES**

The following objectives are the stated objectives of the Watershed-Focused Monitoring Program QAPP, and all services performed by BCTC relating to the North Elkhorn Watershed pursuant to this MOA shall be in furtherance of and shall promote these objectives:

- (1) The characterization and ranking of stream corridor habitat and hydro-geomorphic function;

- (2) The characterization of the pollutant load of streams, tributaries, and major outfalls;
- (3) The enhancement of illicit discharge identification in prioritized subwatersheds;
- (4) Engaging volunteers and the scientific community in data collection efforts (when feasible and appropriate); and
- (5) Laying the foundation for watershed-based plans and TMDL implementation.

**B. DESCRIPTION OF WORK**

The Watershed-Focused Monitoring Program QAPP is divided into five major elements: (1) Stream Corridor Characterization, (2) Stream Biology, (3) Water Quality Monitoring, (4) Discharge Prevention Investigation, and (5) Priority Area Upland Visual Assessment. BCTC EST Program staff and students will perform data collection and monitoring under Element (1) – Stream Corridor Characterization.

BCTC shall engage EST students as samplers to complete Stream Corridor Characterization within sampling periods specified by the QAPP, consistent with Kentucky Watershed Watch volunteer training for biological and habitat assessments, or the equivalent thereof. BCTC shall provide training, including a review of the relevant portions of the QAPP, to BCTC student samplers and shall provide LFUCG-approved training with regard to the hydro-geomorphic assessments required. BCTC shall document all training, including the QAPP review, and shall submit this documentation to LFUCG for certification of the student samplers.

BCTC shall provide all equipment and supplies necessary to conduct Stream Corridor Characterization, including but not limited to D-frame dip nets, plastic containers, forceps, digital cameras, rulers (millimeter) or gravelometers, GPS or equivalent devices, and datasheets.

All work conducted pursuant to this MOA shall be performed in accordance with the detailed description of the work contained in Exhibit A – Description of Work, which is attached hereto and incorporated herein.

### **C. TASKS PERFORMED**

BCTC specifically agrees to satisfactorily complete the following tasks, in furtherance of the Watershed-Focused Monitoring Program QAPP, pursuant to this MOA:

1. BCTC shall submit a class syllabus, training materials (including PowerPoint presentations), and other training records to LFUCG prior to initiation of field activities.
2. Participating students shall sign a Volunteer Monitoring Participant Agreement and Volunteer Activity Waiver and Assumption of Risk form. The form will be provided by LFUCG. BCTC shall provide original signed forms to LFUCG prior to initiation of field activities.
3. BCTC shall submit notices of the sampling schedule to LFUCG in advance of sampling and shall update LFUCG of any changes to the schedule. LFUCG will provide volunteer badges for students to wear while completing the field work, if so desired.
4. BCTC shall coordinate Stream Corridor Characterization by trained students at twenty five (25) headwater reaches between March 1, 2022 and May 31, 2022, consistent with the detailed description contained in Exhibit A – Description of Work.
5. BCTC shall compile and submit data electronically in spreadsheet format. Paper copies or PDFs of all original field datasheets and electronic copies of all photos shall be submitted to LFUCG. Results shall be submitted to LFUCG not less than two (2) weeks prior to the end of the index period to allow for duplicate assessments by LFUCG for quality assurance.

BCTC shall perform and ensure that all duties and services included in the Description of Work (Section B and Exhibit A) and the Tasks Performed (Section C) sections are performed faithfully and satisfactorily at the time, place, and for the duration prescribed herein.

### **D. PAYMENT**

BCTC agrees to provide the services described in this MOA, including the detailed description of work contained in Exhibit A, in consideration for the educational opportunity afforded by LFUCG to BCTC EST Program students to perform scientific sampling and field work in the areas of environmental and ecological science. This is a mutual collaboration with only in-kind services provided; no monetary compensation shall be paid.

**E. TERM OF AGREEMENT**

This MOA shall remain in effect until BCTC has fully complied with the tasks set forth in Section C hereinabove. LFUCG may cancel this agreement at any time upon thirty (30) days written notice to the registered agent of BCTC.

**F. MISCELLANEOUS PROVISIONS**

1. BCTC shall familiarize itself with and shall at all times comply with all federal, state, and local laws, ordinances, and regulations that in any manner affect the services of this agreement.
2. Nothing herein shall create an employment relationship, partnership, or joint venture between the parties or between LFUCG and any students or volunteers provided by BCTC. In performing the services hereunder, BCTC, its employees, students, agents, officers, contractors, representatives, and any volunteers shall not be deemed or construed to be employees or agents of LFUCG in any manner whatsoever.
3. BCTC agrees to indemnify, defend, and hold harmless LFUCG for all claims and liabilities of whatever nature directly or indirectly arising out of, caused by, or attributable to the performance of this MOA by BCTC, its employees, students, agents, representatives, and volunteers.
4. The parties hereto agree that causes of action between the parties shall be governed by applicable provisions of the Kentucky Revised Statutes, and that venue of any legal action shall be a court of appropriate jurisdiction in Fayette County, Kentucky. The parties further agree that Kentucky law shall apply with respect to the interpretation of any provision of this agreement.
5. This MOA shall not create a contractual relationship with or right of action in favor of any third party against either LFUCG or BCTC.
6. If any term or provision of this MOA shall be found illegal or unenforceable by a court of competent jurisdiction, such term or provision shall be deemed stricken and this MOA shall remain in full force.
7. This MOA shall constitute the entire agreement between the parties and no representations, inducements, promises, or agreements, oral or otherwise, which are not embodied herein shall be effective for any purpose. This MOA shall replace any previous agreement between the parties on the same subject matter. This MOA may only be modified by a writing signed by both parties and with the approval of the Lexington-Fayette Urban County Council.

8. The failure of either party to enforce any right reserved to it in this MOA shall not be a waiver of any such right to which the party is entitled, and a waiver by either party of any breach of any provision of this MOA shall not constitute a continuing waiver or waiver of any subsequent breach by either party of either the same or another provision of this MOA.



## **EXHIBIT A – DESCRIPTION OF WORK**

### **North Elkhorn Watershed-Focused Monitoring**

Bluegrass Community and Technical College (BCTC) students will perform tasks in support of and in compliance with the directives of LFUCG's Watershed-Focused Monitoring Program Quality Assurance Project Plan (QAPP). Tracy Knowles, Bluegrass Community and Technical College's Environmental Science Technology Program Coordinator, will be BCTC's Primary Contact, and Dr. James "Wes" Morris, Professor at BCTC, will be BCTC's Secondary Contact. BCTC's Primary and Secondary Contacts are responsible for executing this MOA by coordinating student volunteer training, sampling events, and submission of data under this agreement. Lindsie Nicholas, LFUCG's MS4 Coordinator, will be the Primary Contact representing LFUCG and will receive all records and documentation pertaining to this MOA.

The watershed-focused monitoring is divided into five major elements: 1) Stream Corridor Characterization, 2) Stream Biology, 3) Water Quality Monitoring, 4) Discharge Prevention Investigation, and 5) Priority Area Upland Visual Assessment. BCTC students will be responsible for performing monitoring under element 1) Stream Corridor Characterization.

In preparation for the characterizations, students will need to complete Kentucky Watershed Watch volunteer training for biological (WWSOP03000) and habitat assessments (WWSOP04000), or the equivalent as part of their classwork. Students shall also review relevant portions of the QAPP, and receive LFUCG-approved training on performing the hydro-geomorphic assessments for this project. Documentation of this training and the QAPP review shall be submitted to LFUCG for certification of the samplers.

Stream corridor characterizations will be conducted at a minimum of one 300-foot (100-meter) reach per approximately half mile of perennial stream. In the North Elkhorn Watershed, fifty seven (57) headwater reaches have been identified, twenty five (25) of which are to be completed by trained BCTC students. Additional characterizations may be performed within these reaches if desired. The characterizations will occur during the sampling index periods for each reach: headwater streams from March 1, 2022 to May 31, 2022; wadeable streams from May 1, 2022 to September 30, 2022.

During the characterization, visual assessments will be made of habitat, hydro-geomorphology, and macroinvertebrates. BCTC shall provide the equipment necessary to conduct these characterizations, which includes D-frame dip nets, plastic containers, forceps, digital cameras, rulers (mm) or gravelometers, GPS or equivalent devices, and datasheets.

Habitat parameters, including riffle and pool substrates, stream channelization, riparian conditions, and in-stream cover will be assessed visually.

Habitat characteristics are scored on a high gradient habitat assessment field data sheet modified from US EPA 841-B-99-002 (Barbour et al., 1999). Photographs will be taken to document the sampling zone, upstream, downstream, and typical in-stream habitats for each reach. Each photo will be labeled with the stream name, location, station number, sampling date, and the features documented in the photo. This data is to be recorded on a photo log datasheet with results of the assessment. GPS coordinates of each photograph's location will be recorded.

Substrate characterization will be conducted by visual estimation of substrate size within the assessment reach following Kentucky Division of Water's Methods for Assessing Habitat in Wadeable Waters (KDOW 2011a). Visual estimates of substrates will involve estimating the percentage of riffle, run, and pool habitat within the assessment reach and recording this information on the datasheet. Substrates will be visually assessed within each of these habitats using a ruler or gravelometer to help gauge substrate particle size. This information will be recorded on the Substrate Characterization / Macroinvertebrate Screening Field Sheet.

Macroinvertebrate screening should follow the Kentucky Watershed Watch Biological Assessment High Gradient Standard Operating Procedure (WWSOP03000). Various habitat types will be sampled using a D-frame dip net throughout a 300-foot- (100-meter)-long sampling reach. All organisms are to be counted and identified using the Kentucky Watershed Watch Benthic Macroinvertebrate Identification Key. This information will be recorded on the Substrate Characterization / Macroinvertebrate Screening Field Sheet.

Data will be compiled and submitted electronically to LFUCG in spreadsheet format. Hardcopies or PDFs of all datasheets shall be submitted to LFUCG. All photos will be compiled and submitted to LFUCG. All data and supporting documentation shall be submitted to LFUCG two weeks prior to the end of the index period to allow for duplicate assessments by LFUCG for quality assurance.

It is anticipated that the spring semester "EST290: Applied Projects in Environmental Science Technology" class will conduct headwater stream corridor characterizations.