

# Student Sustainability Council Meeting

## 26 April 2017

Rachel, ellen green , lauren thomas, brad, sophie, braeden?, abby, victor, jared, leslie, rachel, julianna, gabe, zach, nachie, amanda, maxwell, mitch, gray, ryan, jennifer, jerrod, ben, john, elizabeth peneva

18:33 - Meeting begins with introductions

18:40 - Reading of the preamble

18:41 - First presentation begins with the stream conservation proposal

18:49 - First presentation ends

18:49 - Q&A session for stream conservation proposal begins

18:53 - Q&A session for stream conservation proposal ends

18:54 - Second presentation begins with the beekeeping workshop proposal

18:58 - Second presentation ends

18:58 - Q&A session for the beekeeping workshop proposal begins

19:01 - Q&A session for the beekeeping workshop proposal ends

19:01 - Third presentation for the bat conservation proposal begins

19:15 - Third presentation ends

19:15 - Q&A session for the bat conservation proposal begins

19:21 - Q&A session for the bat conservation proposal ends

19:22 - Fourth presentation begins with the director stipend proposal

19:25 - Fourth presentation ends

19:25 - Q&A session for the director's stipend proposal begins

19:32 - Q&A session for the director's stipend proposal ends

19:34 - Discussion on stream restoration proposal begins

19:44 - Motion to vote on stream restoration proposal

**Vote: Yes: 18 No: 0 Abstain: 1**

19:45 - Discussion on the beekeeping workshop proposal begins

19:51 - Motion to amend (Gabe, Mitch 2nd)

**Vote: Yes: 19 No: 0 Abstain: 0**

Amendment: the workshop participants must be a majority students

19:52 - Motion to vote on beekeeping proposal as amended (Mitch, Jennifer 2nd)

**Vote: Yes: 19 No: 0 Abstain: 0**

19:53 - Discussion on the bat conservation proposal begins

19:58 - Motion to amend (Ben, John 2nd)

**Vote: Yes: 11 No: 8 Abstain: 0**

Amendment: the ssc will not fund the plaque, we find it unnecessary in this particular case.

19:59 - Motion to vote on proposal as amended (Mitch, Elizabeth 2nd)

**Vote: Yes: 18 No: 0 Abstain: 1**

20:00 - Discussion on the director's stipend proposal begins

20:10 - Motion to vote on directors stipend proposal (Lauren, Gabe 2nd)

**Vote: Yes: 1 No: 12 Abstain: 6**

20:11 - Discussion on UFI scope change begins

20:17 - Motion to vote for scope change (Gabe, Will 2nd)

**Vote: Yes: 17 No: Abstain: 2**

20:17 - Director election statements are made

20:26 - Motion to vote on director of T&A

**Mitch: 20 Julianna: 3 Rachel: 1**

## University of Kentucky Student Sustainability Council 2016-2017 Grant Application

1. Name: Shane Tedder
2. Email: [shane.tedder@uky.edu](mailto:shane.tedder@uky.edu)
3. UK Affiliation: Staff
4. Proposed Project Title: Campus as a Living Lab Partnership – Stream Restoration, Student Engagement, and Campus Grounds.
5. If applicable, please provide the sponsoring or overseeing organization. (e.g. the Office of Sustainability, Wildcat Wheels, the Dept. of Ag. Economics, etc.): UK Facilities Management – Letter from George Riddle attached.
6. Total Amount Requested from the Council: Up to \$50,000
7. Would you like to make a presentation to the Council before your proposal is reviewed? Yes
  
8. Please mark the primary and secondary focus areas of your project with a **1** and **2**, respectively.

- Recycling:                      Climate Change:
- Transportation:                **Local Environment:**
- Agriculture/Gardening:        Behavioral Change:

**Species  
Diversity/Conservation:**

**Other (Please Describe): Student  
Engagement**

- **Water:**
- Renewable Energy/  
Energy Conservation:

9. Please name any other project leaders:

**Name – George Riddle**

**Title & Department - Manager – Campus Physical Plant**

**Project Role – Point for campus operations component of partnership**

**Email – [George.riddle@uky.edu](mailto:George.riddle@uky.edu)**

**Name – Carmen Agouridis**

**Title & Department – Extension Faculty in Biosystems and Ag Engineering**

**Project Role – Point for student engagement component of partnership and advisor to ecological restoration technical effort, permitting**

**Email - [carmen.agouridis@uky.edu](mailto:carmen.agouridis@uky.edu)**

**Name – Kevin Lewis**

**Title & Department - Water Quality Compliance Manager  
Environmental Management Department**

**Project Role – Point for Environmental Management and Stormwater compliance components**

**Email – [George.riddle@uky.edu](mailto:George.riddle@uky.edu)**

*Please note that any project leaders listed will be excused for closed discussion of their project proposal.*

**10. Please describe the project, its goals, and how it contributes to UK student knowledge, attitudes & culture, or practices of the 3 pillars of sustainability (i.e. economic, environmental and social), including potential long term effects.**

This project is a proposed partnership between UK Facilities, Environmental Management, Biosystems and Ag Engineering, and the Student Sustainability Council to restore ecological functionality to an

unnamed tributary (UT) of the West Hickman Creek Watershed.  
Specifically:

Restore stream and valley, with natural channel meander geometry.  
Construct with water quality improvements such as hyporheic aquifer for nitrate removal and floodplain wetlands, and in-stream habitat. Plant riparian buffer.

We will also pursue strong integration of the project's design, construction and monitoring/maintenance with related courses to maximize student engagement and the use of the campus as a living laboratory. The stream in its current condition is circled in red on the image below.

This project is an excellent example of applying the triple bottom line to campus operations and has the distinct benefit of strong connection with curriculum, student experience.

1. Environmental – Restoring this poor habitat quality stream will improve water quality in this watershed through the bioremediation provided by aquatic flora and fauna, increased infiltration to the water table, the creation of new wildlife habitat, increasing the biodiversity of campus grounds, and reducing the campus area that has to be managed through fossil-fuel intensive mowing and trimming.
2. The social benefits of this project are equally compelling. Enhancing the water quality in the watershed has health benefits for everyone who encounters the water. The project also provides a unique educational opportunity for students enrolled in a wide variety of campus courses. An indirect social benefit will be the enhanced quality of life that results from living near high quality and functioning ecological communities.
3. From an economic vitality standpoint, the project has direct and indirect benefits to the campus and the city of Lexington. Direct impacts will come in the form of reduced maintenance costs from mowing and trimming the area. Indirect financial benefits may take the form of additional project funds from the LFUCG Stormwater Incentive Grant Program and the fostering of positive relationships with neighboring communities. Indirect benefits to the community include reduced pressure on the already stressed storm sewer system, and enhanced water quality.

**11. Name any anticipated project affiliates and describe the extent of their support, including any financial, matching or in-kind support. Specific details are encouraged.**

This project is in the schematic design phase. SSC funding will only be used if other funding sources are identified and confirmed that match the SSC funding at a minimum of two to one (\$50K SSC + at least \$100K other sources). SSC funds shall be automatically unencumbered (unless the sitting council approves an extension request) if matching funds for this project are not identified and confirmed by February 2018.

PPD Grounds – Funds, ongoing maintenance, and project management  
UK Environmental Management – Technical expertise, tracking, reporting, and verification of impact  
Bio Systems and Ag Engineering – Integration with curriculum and student experience and technical expertise, permitting (representative agent)  
LFUCG Stormwater Grant Program (SGP) – Potential source of additional funds.

**12. Please mark the primary target population of your project with a 1.**

Community:4

Faculty:3

- UK (general): 1
- Undergraduates:2a
- Graduates:2b Other (Please Describe):

**In 250 words or less, please answer the following questions.**

**13. Describe the intended University of Kentucky audiences and potential number of people impacted including any potential diverse segments such as**

**student or community organizations and supporting evidence (e.g. expected or historical event/speaker attendance).**

The project will impact everyone who travels the Alumni Drive Corridor to some degree because the transformation from a drainage ditch to a functional stream biome will be impossible to miss. Signage will be considered to enhance the passive educational value of the project. There will also be direct student impact.

**14. Are there any students involved in the proposed project? If so, do they benefit from professional or technical skills, outputs, or experiences such as presentations, posters, or reports?**

The restored stream at Vaughn's Branch (at corner of Alumni and Nicholasville Road) serves as an outdoor classroom for BAE 532/CE 542 Introduction to Stream Restoration. This project would add complexity and new material to the outdoor classroom options for this class.

The spring course, which typically enrolls 20-25 students, introduces the principles of fluvial geomorphology for application in restoring impaired streams. The restored stream serves as the basis for learning skills such as identifying fluvial features, surveying stream cross-sections, conducting habitat and macroinvertebrate assessments, and understanding the stream

construction process (a video was produced by Agricultural Communications showcasing the project from start to finish - <https://www.youtube.com/watch?v=0j6gHgXLT4Y>). The restored stream is also used the teach material in BAE 535/MNG 564 Environmental Control System Design and Reclamation and Biosystems Engineering and Civil Engineering capstone projects. From an extension standpoint, the stream is frequently showcased and used as a learning instrument for presentations and workshops on topics such as stormwater management and stream restoration.

Restoring the unnamed tributary (UT) that runs parallel to Alumni Drive near the athletic fields would enhance teaching and extension programs at UK. For instance, the pool depth at Vaughn's Branch means students cannot conduct a longitudinal survey without the use of waders nor can they conduct bed material surveys in pools. The smaller stream size of the UT would allow for such activities. Restoration of the UT would also provide students and the UK and neighboring communities with

a chance to interact with the stream. For example, the restoration design could incorporate trails and adjacent outdoor fitness stations and passive signage.

Presently, teams in BAE 532/CE 542 have assessed and presented conceptual designs for the stream (one team in 2016 and one team in 2017). This project could provide opportunities for design input from students in this course as well as others in BAE, NRES, LA and the like.

**15. Please describe any previous history and to what extent you, other project leaders, or the sponsoring organization may have with the UK Student Sustainability Council.**

The Office of Sustainability has successfully collaborated with the SSC on a variety of high profile projects including the Sustainability Challenge Grant Program and the Student Sustainability Internship Program.

**16. Please outline a timeline and milestones to ensure project efficacy prior to and after project implementation.**

The timeline for this project is developing. A preliminary design document and cost proposal has been developed by the local firm EcoGro. See attached. Several factors will impact timing including weather, season, course schedules, and related construction projects in the area. When complete funding is secured a detailed project schedule will be developed and distributed to the project liaison (if approved).

**17. Does the success of your project require prior approval of other UK or non-UK entities (e.g. IRB or venue approval, etc.)? If so, please provide supporting documentation.**

Yes. Facilities Management. See attached letter from Tim Clark, Associate Director of the Campus Physical Plant.

**18. Please demonstrate how the Student Sustainability Council will be credited or advertised in your project (this can include promotional material). Would a project leader be available for a radio interview?**

The SSC will be recognized as a catalyst and critical partner for this project in all press releases, websites and social media references. SSC will also be credited if interpretative signage is developed. Instructors whose courses utilize the restoration will also be provided a background summary of the project that includes the SSC contribution. Would love to talk about it on the radio.



19. Using the following format, please provide a line item budget for the total amount request and what percent of the project is being sponsored by SSC funding. Provide information sources or reasoning for the budget estimates.

Description	\$ Total Cost	\$ Request from SSC	Source of remaining funds
Stream Restoration (650 linear feet at \$300 per)	\$195,000 *	Up to \$50,000	PPD, LFUCG SGP
Interpretative Signage	TBD	N/A	

\*Based on EcoGro Proposal

20. Are you willing to accept a general reduction in your budget? Yes

21. Are you willing to accept line item changes in your budget? n/a

22. You may include additional attachments to supplement the application such as promotional material, resumes, letters of collaborative funding, etc.

Attachments:

- A. Letter of support from Facilities Management
- B. Letter of support from Environmental Management
- C. Letter of support from Carmen Agouridis
- D. Cost and schematic proposal from EcoGro

Submit project proposals and/or questions on proposal processes to [ukstudentsustainabilitycouncil@gmail.com](mailto:ukstudentsustainabilitycouncil@gmail.com) with '**SSC Proposal**' as the subject line.

If successfully funded, a councilmember will be assigned to your project. Failure to communicate with this person can result in a total or partial loss of funding. **Any changes in the use of approved funding must be resubmitted and re-approved by the Council. Unused funds are automatically returned to the SSC.**

Project proposals will be considered on a rolling basis and must be received 1 week prior a scheduled meeting in order to be considered for the agenda. If SSC and applicant are able to confirm that project, if funded, would be in compliance with

University Business Procedures. The Fall 2016 meeting schedule is listed on the following page.

Attachment A - Letter of support from Facilities Management

Attachment B Letter of Support from Environment Management

Attachment C Letter of Support from Carmen Agouridis

## University of Kentucky Student Sustainability Council 2016-2017 Grant Application

1. Name: Clare Rittschof
2. Email: clare.rittshof@uky.edu
3. UK Affiliation: Assistant Professor
4. Proposed Project Title: Beginner beekeeping workshop
5. If applicable, please provide the sponsoring or overseeing organization. (e.g. the Office of Sustainability, Wildcat Wheels, the Dept. of Ag. Economics, etc.): Department of Entomology
6. Total Amount Requested from the Council: \$750
7. Would you like to make a presentation to the Council before your proposal is reviewed? Yes
  
8. Please mark the primary and secondary focus areas of your project with a **1** and **2**, respectively.

- Recycling:
- Transportation:
- Agriculture/Gardening: (1)
- Water:
- Renewable Energy/  
Energy Conservation:

- Climate Change:
- Local Environment: (2)
- Behavioral Change:
- Species Diversity/Conservation:
- Other (Please Describe):

9. Please name any other project leaders:

<b>Name</b>	<b>Sarah Preston</b>
<b>Title &amp; Department</b>	Graduate student/Entomology
<b>Project Role</b>	Co-instructor
<b>Email</b>	sarah.peaslee@uky.edu

<b>Name</b>	Joseph Palmer
<b>Title &amp; Department</b>	Research Technician
<b>Project Role</b>	supervisor
<b>Email</b>	Palmer.joseph@gmail.com

*Please note that any project leaders listed will be excused for closed discussion of their project proposal.*

10. Please describe the project, its goals, and how it contributes to UK student knowledge, attitudes & culture, or practices of the 3 pillars of sustainability (i.e. economic, environmental and social), including potential long term effects.

**Project:** A 4-session on-campus introductory beekeeping workshop, managed in part by a graduate student, and targeted at undergraduates or local residents.

**Goals:** Introduce students to the basics of beekeeping, including bee natural history, basic tools and equipment, and disease management practices. Provide an instructional opportunity for a graduate student interested in pursuing an extension career.

**Sustainability Pillars:** “Backyard beekeeping” is rewarding to the beekeeper and, when done using healthy and sustainable practices, benefits pollinators, gardeners, and consumers (thus it has economic, environmental, and social sustainability consequences). Beekeeping is an art and a science that is fulfilling at all ages. Showing students the beekeeping basics will give them the foundation to be able to keep bees whenever they want in the future (thus it is a lifetime skill with potentially long-term consequences). Although beekeeping is a fun, safe, and rewarding activity, there are many challenges to starting, including being intimidated by bee stings, confusion over the vast amount of equipment options, and uncertainty about the prospect of managing colonies for prevalent parasites and disease. We will address these challenges, and at the same time provide a graduate student valuable teaching experience which will help her secure a job in the future.

11. Name any anticipated project affiliates and describe the extent of their support, including any financial, matching or in-kind support. Specific details are encouraged.

A small grant from the Natural Resources Conservation Service was used to furnish two honey bee colonies and some equipment on the roof of Barnhart Hall. These colonies are to be used for educational purposes, including this beekeeping workshop. This grant also was used to install a pollinator garden outside of Barnhart, which can be used in our course to demonstrate pollinator friendly plants. Rittschof's salary is furnished by the University of Kentucky, which can be considered a financial match. Portions of Rittschof's start-up funds have been used to purchase miscellaneous equipment for use in the course.

12. Please mark the primary target population of your project with a **1**.

- UK (general):
- Undergraduates: **(1)**
- Graduates:

- Community:
- Faculty:
- Other (Please Describe):

**In 250 words or less, please answer the following questions.**

13. Describe the intended University of Kentucky audiences and potential number of people impacted including any potential diverse segments such as student or community organizations and supporting evidence (e.g. expected or historical event/speaker attendance).

The intended audience is undergraduate and graduate students of any age and discipline. The workshop will be capped at 10 people in order to make sure everyone gets quality hands-on experience. My vision is to grow and expand this workshop in subsequent years to involve more students and community members, and potentially offer this for class credit. The SSC will support the trial that is important for making a case for a more involved class in the future. I have given about 8 talks to local beekeeping organizations in the last year, and there is tremendous community need for these types of classes. I am trying to structure a class that will specifically benefit UK students by being accessible and on-campus. However, open slots can be filled by community members.

14. Are there any students involved in the proposed project? If so, do they benefit from professional or technical skills, outputs, or experiences such as presentations, posters, or reports?

My intention is to provide an instructional opportunity for a graduate student through this project. This will be a form of professional skill development (curriculum design and presentation).

15. Please describe any previous history and to what extent you, other project leaders, or the sponsoring organization may have with the UK Student Sustainability Council.

We have no prior experience, but we are new to campus!

16. Please outline a timeline and milestones to ensure project efficacy prior to and after project implementation.

May 1 2017 – Purchase any equipment for workshop

April 24-May 20 2017: Recruit workshop participants

Workshop Day 1: Saturday May 20, 2017 11-1 PM – include a pre-workshop knowledge quiz and survey of goals and interests

Workshop Day 2: Saturday June 3, 2017 11-1 PM

Workshop Day 3: Saturday June 10, 2017 11-1 PM

Workshop Day 4: Saturday June 17, 2017 11-1 PM – include a post-workshop knowledge quiz and survey for feedback

17. Does the success of your project require prior approval of other UK or non-UK entities (e.g. IRB or venue approval, etc.)? If so, please provide supporting documentation.

No

18. Please demonstrate how the Student Sustainability Council will be credited or advertised in your project (this can include promotional material). Would a project leader be available for a radio interview?

The SSC will be noted as a sponsor in all advertising material, and acknowledged to participants on Day 1 of the workshop. The project leader is available for radio interview.

19. Using the following format, please provide a line item budget for the total amount request and what percent of the project is being sponsored by SSC funding. Provide information sources or reasoning for the budget estimates.

Description	\$ Total Cost	\$ Request from SSC	Source of remaining funds
Student safety equipment (bee jackets, 10)	500.00	250.00	Rittschof Lab
Graduate student time (prep. and instruction)	300.00	300.00	
Miscellaneous equipment (smoker fuel, mite treatments for colonies)	200.00	200.00	

20. Are you willing to accept a general reduction in your budget?

Yes

21. Are you willing to accept line item changes in your budget?

Yes

22. You may include additional attachments to supplement the application such as promotional material, resumes, letters of collaborative funding, etc.

See attached CVs for Rittschof and Preston

Submit project proposals and/or questions on proposal processes to

**ukstudentsustainabilitycouncil@gmail.com** with 'SSC Proposal' as the subject line.

If successfully funded, a councilmember will be assigned to your project. Failure to communicate with this person can result in a total or partial loss of funding. **Any changes in the use of approved funding**

**must be resubmitted and re-approved by the Council. Unused funds are automatically returned to the SSC.**

Project proposals will be considered on a rolling basis and must be received 1 week prior a scheduled meeting in order to be considered for the agenda. If SSC and applicant are able to confirm that project, if funded, would be in compliance with University Business Procedures. The Fall 2016 meeting schedule is listed on the following page.

**University of Kentucky Student Sustainability  
Council  
20162017 Grant Application**

1. Name: Leandro "Nachie" Braga
2. Email: LeandroBraga@uky.edu
3. UK Affiliation: NRES Student
4. Proposed Project Title: Bat Conservation at McConnell Springs
5. If applicable, please provide the sponsoring or overseeing organization. (e.g. the Office of Sustainability, Wildcat Wheels, the Dept. of Ag. Economics, etc.): UK Greenhouse Club
6. Total Amount Requested from the Council: \$4,398.00
7. Would you like to make a presentation to the Council before your proposal is reviewed? Yes.
8. Please mark the primary and secondary focus areas of your project with a **1** and **2**, respectively.

- Recycling:
- Transportation:
- Agriculture/Gardening:
- Water:
- Renewable Energy/  
Energy Conservation:

- Climate Change:
- Local Environment: 2
- Behavioral Change:
- Species  
Diversity/Conservation: 1
- Other (Please Describe):

9. Please name any other project leaders:

**Name** Steven Rogers

**Title & Department** Park  
Manager, McConnell  
Springs



<b>Project Role</b> Parks Liaison	
<b>Email</b> <a href="mailto:srogers@lexingtonky.gov">srogers@lexingtonky.gov</a>	
<b>Name</b> Richard Mathy	
<b>Title &amp; Department</b> Treasurer, Friends of McConnell Springs	
<b>Project Role</b> Immediate recipient of funds	
<b>Email</b> rmathy@lexingtonky.gov	

*Please note that any project leaders listed will be excused for closed discussion of their project proposal.*

10. Please describe the project, its goals, and how it contributes to UK student knowledge, attitudes & culture, or practices of the 3 pillars of sustainability (i.e. economic, environmental and social), including potential long term effects.

The project *Bat Conservation at McConnell Springs* seeks to engage UK undergraduate students in an ecological education experience. The project supports the environmental sustainability of Lexington through restoration of endangered bat habitat corridors.

A growing trend in conservation literature describes the creation and maintenance of networks of green spaces. Larger green spaces, as well as corridors connecting them, are essential to the ecological health of otherwise fragmented habitats. In recent years, small indigenous bats in particular have suffered from habitat loss. Of these the Indiana Bat, a federally listed Endangered Species, is of particular interest to this project.

Following recent acoustic monitoring data suggesting the presence of the Indiana Bat in McConnell Springs, we are proposing a partnership with the University of Kentucky environmental club Greenhouse and the Student Sustainability Council to install an array of bat habitat structures in a known flyway at the park. With support of the McConnell Springs park staff and management, participating students from the Greenhouse club will learn about this contribution to habitat corridor restoration and how it enhances the environmental sustainability of Lexington.

McConnell Springs is a cultural and historical icon in the Lexington landscape, and the students' offcampus service education at the park fortifies the University's status as a community service partner. The students will discuss the state of bat conservation science and learn about a variety of species sampling and habitat equipment, which will complement and reinforce their inclass learning.

11. Name any anticipated project affiliates and describe the extent of their support, including any financial, matching or in-kind support. Specific details are encouraged.

The Friends of McConnell Springs nonprofit, which originally purchased the park and gave it to the city in the 1990s, has given their support to this project and will be acting as the recipient of any disbursed funds. Their unique relationship with the park allows for SSC monies to be used directly for the budgeted items without having to pass through the bureaucracy of the LFUCG Division of Parks & Recreation.

McConnell Springs Park management and staff are of course also in support of this project and will be participating directly in the installation of the habitat as well as providing project oversight and environmental education to the UK students who will be learning about the BrandenBark habitat array. Park Manager Steven Rogers, a trained ecologist, will be coordinating the educational programming associated with this installation. In addition, the park will be paying for a number of other items associated with the broader scope of this project, including night vision trail cameras and mist nets to be used in gathering additional data towards future conservation initiatives. For full details of financial support from Lexington Parks & Recreation, please see the line item budget on this proposal.

Finally, we have partnered with the UK Greenhouse environmental club to offer their members an exciting opportunity to be involved with this conservation project. Coordination with the club has proceeded primarily through its current president, Rachel Cook.

12. Please mark the primary target population of your project with a 1.

- UK (general):
- Undergraduates:
- Graduates:
- Community: 1
- Faculty:
- Other (Please Describe):

**In 250 words or less, please answer the following questions.**

13. Describe the intended University of Kentucky audiences and potential number of people impacted including any potential diverse segments such as student or community organizations and supporting evidence (e.g. expected or historical event/speaker attendance).

The intended audience of this project includes three groups: UK students, community park visitors, and park staff.

The student organization and partner in this project is UK Greenhouse. This club has 30 members who will be positively impacted through their education about the BrandenBark bat habitat array and other bat conservation efforts. Discussions with the club's President and Vice President as well as Treasurer confirm that there is a high degree of interest in this project within the club and that club members will be available over the summer to participate in the associated educational activities.

In addition, we have received a letter of support from Dr. Mike Lacki, a professor of wildlife management in the University's Department of Forestry. Dr. Lacki has indicated

that the installation of this habitat will provide his future forestry students with a valuable learning aid as well as a potential site for field trips.

Another audience group for this project are the community members and visitors to McConnell Springs Park. In the McConnell Springs Nature Center, a commemorative plaque will explain the BrandenBark Poles, discuss ecological habitat corridors, and identify the SSC's contribution to the project.

The annual number of visitors to the park is over 35,000, many of whom will observe the completed project and learn about its significance. The BrandenBark habitat array will become a permanent fixture in the park, with unquantifiable impact.

The McConnell Springs staff will be impacted by the project as they discuss and answer students' questions about the species monitoring equipment. The park staff will also provide oversight and leadership to the installation of the habitat array.

14. Are there any students involved in the proposed project? If so, do they benefit from professional or technical skills, outputs, or experiences such as presentations, posters, or reports?

The members of UK Greenhouse will benefit directly by gaining practical experience with park landscape management and species conservation. This will be a unique opportunity for students to participate in a highly visible, cutting edge installation at a major city park. Participants will be engaging directly with several different concepts related to sustainability and careers in the environmental field, including park management and bat conservation.

Steven Rogers, the Park Manager of McConnell Springs, will be assisting in the installation and giving the students an exclusive presentation related to bat ecology in the park as well as recent efforts at conservation and the unique history of McConnell Springs. Bat monitoring is a highly valued sector in the expanding field of environmental conservation, and the members of UK Greenhouse will be exposed to many exciting career opportunities through their involvement with this project.

Though Greenhouse is forming the backbone of our intended audience until such time as the logistics of the event can be finalized, we anticipate being able to invite other interested students to participate through existing listservs such as that of the Natural Resources and Environmental Science (NRES) program. Members of the Student Sustainability Council will also be given priority invitations to any educational events associated with this installation.

15. Please describe any previous history and to what extent you, other project leaders, or the sponsoring organization may have with the UK Student Sustainability Council.

There has been no past collaboration between the Student Sustainability Council and any of the partners on this project, but it should be noted that UK Greenhouse founding member and Club President, Rachel Cook, is currently a member of the Council and that the club was recently granted an organizational seat on the SSC.

16. Please outline a timeline and milestones to ensure project efficacy prior to and after project implementation.

17. Does the success of your project require prior approval of other UK or nonUK entities (e.g. IRB or venue approval, etc.)? If so, please provide supporting documentation.

Letters of partnership from the following have been appended to this application:

Friends of McConnell Springs  
McConnell Springs Park Management  
Dr. Mike Lacki, University of Kentucky wildlife management professor  
Copperhead Consulting

18. Please demonstrate how the Student Sustainability Council will be credited or advertised in your project (this can include promotional material). Would a project leader be available for a radio interview?

The Student Sustainability Council will have its name and emblem on a metal plaque that will be displayed on the wall of the Nature Center at McConnell Springs. This plaque is proposed to read: "BrandenBark artificial habitat for threatened bat species, installed in partnership with the University of Kentucky Student Sustainability Council," and could also have other information or even a photo of the installation. Plaque pricing varies greatly according to dimensions, so the final design should be voted on by the council (see budget, below).

Project leaders, including the Park Manager at McConnell Springs, will be available for radio interview.

19. Using the following format, please provide a line item budget for the total amount request and what percent of the project is being sponsored by SSC funding. Provide information sources or reasoning for the budget estimates.

**Commemorative plaque quotes are from the Lexington Trophy company, which has provided all existing signage at McConnell Springs. The price listed is for an 8x12" plaque, but a variety of other dimensions are available, which could greatly impact the ultimate cost of the project. For the purposes of**

**this proposal we recommend that the Student Sustainability Council come to its own decision about the final size of the plaque and how much information should be contained on it.**

20. Are you willing to accept a general reduction in your budget? No

21. Are you willing to accept line item changes in your budget? Yes

You may include additional attachments to supplement the application such as promotional material, resumes, letters of collaborative funding, etc.

See the following documents, attached to this email:

BrandenBark promotional brochure  
Leandro Braga Resume  
Price list from Copperhead Consulting LLC

---



**Steven Rogers** <srogers@lexingtonky.gov>  
To: Nachie Leandro Braga <songofthecedars@gmail.com>

Tue, Apr 4, 2017 at 4:20 PM

To whom it may concern,

As the manager of McConnell Springs Park I fully support the Bat Conservation Project that is being proposed by Leandro "Nachie" Braga. As a Natural Area park with the Division of Parks and Recreation, McConnell Springs serves the public by protecting native plants and animals of the Bluegrass. An ongoing focus of the park is the restoration and protection of vital habitat that surround the historic Springs. Through past research, that is referenced in Nachie's proposal, threatened and endangered bat species including the Indiana Bat have been identified within the boundaries of the park. This project will create ideal shelters for many species of bats and hopefully encourage their continued usage of the park. Another focus of the park is to be an educational resource for the community, over 4,400 students attended environmental education programs at the park in 2016. The proposed structures will be an important educational tool to assist park staff in explaining the importance of proper habitat management and conservation. The staff at McConnell Springs and Lexington Parks and Recreation are committed to the maintenance and upkeep of any installations in the park that are the result from this proposed project.

**Steven Rogers**

**Park Manager**

**McConnell Springs**

**Camp Kearney**

**Lexington Parks and Recreation**

**416 Rebmann Lane**

**Lexington, KY 40504**

**(859) 2254073 (Office)**

**(606) 4227537 (Cell)**

[Flickr: McConnell Springs' Photostream](#)

*"A nationally accredited Parks & Recreation Agency"*

<https://mail.google.com/mail/u/0/?ui=2&ik=56a25753d4&view=pt&search=inbox&th=15b3a9ffd9bceadb&siml=15b3a9ffd9bceadb>

1/1

**UNIVERSITY**

**OF KENTUCKY**

**College of Agriculture, Food & Environment**

11 April 2017

University of Kentucky Student Sustainability Council University of Kentucky  
ukstudentsustainabilitycouncil@gmail.com

**RE: SSC Proposal – Bat Conservation at McConnell Springs**

Dear Members of the UK Student Sustainability Council:

**Department of Forestry**

106 Thomas Poe Cooper Bldg  
Lexington, Kentucky 40546-0073  
Phone: (859)257-7596 FAX: (859)323-1031

I am writing this letter on behalf of Mr. Leandro Nachie Braga's request for funding support for the bat conservation project proposed, and in process, at McConnell Springs.



I have met with Mr. Braga; reviewed the proposal and accompanying materials he provided; and, have also read two other letters of support for the project, one from Mr. Charlie Boland, the Chair of Friends of McConnell Springs, and the other from Mr. Steven Rogers, the Park Manager for Lexington Parks and Recreation. As a research scientist with 39 years of experience studying the ecology and natural history of North American bats, I believe I am qualified to make an appropriate assessment of the merits of this project.

The project addresses a local need of providing suitable, summer roosting habitat for forest bats in the urban landscape of Lexington, Kentucky. Lexington lies within the distribution of three federally protected and one declining *Myotis* species, *M. sodalis* (Indiana Bat), *M. septentrionalis* (Northern Long-eared Bat), *M. grisescens* (Gray Bat), and the declining *M. lucifugus* (Little Brown Bat). With the exception of the Gray Bat, a cave obligate, the remaining species are all known to occupy and roost in constructed bat houses of varying designs in the summer months, a critical period when young are born and learn to develop the flight skills essential for survival. Unfortunately, the emergence in the state of New York in 2006, and subsequent spread throughout eastern North America of a European fungal disease, *Pseudogymnoascus destructans*, has led to precipitous region-wide declines in all of these bat species, except the Gray Bat. And, even the hibernacula of the latter species are now recently being occupied by the fungus with future declines in these bats anticipated.

Because the best chance for survival that bats affected by the fungus have is through enhanced reproduction in summer months, all attempts to foster summer habitat of these species, roosting habitat in particular, are sorely needed throughout their distributions. Promoting habitat in both rural and urban environments is strongly supported by all scientists addressing the conservation of North American bats. In fact, research based on acoustic detections, completed by a former graduate student of mine and now faculty member at Eastern Kentucky University, Dr. Luke Dodd, has demonstrated the presence of several bat species in the McConnell Springs area.

An Equal Opportunity University

This project is accompanied by support from and, with a bat roost design, of Copperhead Consulting, Inc., a highly reputable company with strong environmental convictions and an active bat research program of their own. The founder and owner, Mr. Mark Gumbert, has spent decades surveying and studying bats in Kentucky. The BrandenBark roost design that his company has developed has been highly successful in achieving frequent occupancy rates by the three species discussed above. The placement of these bat houses at McConnell Springs would be a welcomed habitat enhancement for these bat species in

the Lexington area. I would also add, that presence of these structures at McConnell Springs would create opportunities for students enrolled in wildlife and biology classes at UK to see these structures and learn of their value for declining bats.

Given the letters of support provided by others, the involvement of Copperhead Consulting, and the potential benefit to local bats from such efforts, I fully support the bat conservation project at McConnell Springs and would recommend that it be funded. Although I do not know Mr. Braga that well, he seems personable, strong in his convictions, and is an excellent student with a 4.0 GPA. I believe he can and will complete the project in a timely manner if funded. Should you have any further question for me, do not hesitate to contact me at 859-257-8571 or by email at [mlacki@uky.edu](mailto:mlacki@uky.edu).

Respectfully submitted,

Michael J. Lacki  
Professor  
Department of Forestry  
University of Kentucky

2017 Nachie Leandro Braga  
LFUCG- McConnell's Springs

3 April

*Sent via email*

***Re: Cost estimates for three BrandenBark™ structures and installation assistance in Fayette County, Kentucky.***

Mr. Braga,

Thank you for your interest in using BrandenBark™ on your future project. Below is the cost estimate you requested for three BrandenBark™ structures.

The cost for Copperhead to purchase and coordinate delivery of the untreated utility poles, deliver three sheets of BrandenBark™ and mounting hardware to the installation site and provide one biologist to assist in the installation is: **\$3,160.00**. LFUCG would be responsible for providing a backhoe (or similar) to unload the poles from the shipping truck, assisting in attaching the BrandenBark™ to the poles and installing the completed BrandenBark™ structures.

If LFUCG is unable to provide a machine to unload the poles on the delivery date a self-unloading shipping truck can be used to ship the order. The additional cost for the self-unloading truck will be: **\$1,060.00**. This additional charge will bring the total project cost to: **\$4,220.00**. LFUCG will still be responsible for providing a machine on the installation date to install completed structures.

As a costing note, we were able to locate another utility pole supplier that was able to reduce the cost of the three untreated utility poles to \$1,210.00 instead of the previously quoted \$2,550.00.

We hope that this proposal provides the information you require for review. Please do not hesitate to contact me if you have any questions, need a further cost breakdown, or require any additional information.

Sincerely,

Zachary Baer  
Biologist  
859-925-9012(o)  
724-549-6739(c)

