

**Memorandum of Agreement
Between
Southeastern Cave Conservancy, Inc.
and
Rachel Saker**

The Southeastern Cave Conservancy, Inc. (SCCi) and **Rachel Saker (Applicant)** enter into a Memorandum of Agreement (MOA) to engage in a **Great Hall of Mysteries Vertical Exploration Project** in Tumbling Rock Cave Preserve as noted in the attached Special Use Permit (SUP) request.

The period of this agreement is from **January 23, 2020 to December 31, 2020**. This MOA is valid to the named applicant until it expires or is rescinded by the SCCi. However, the MOA becomes immediately void if the Applicant violates the terms and/or conditions of the MOA or any non-excluded provisions of the management policy as determined by the designated project representative or Vice-chair of the SCCi.

Responsibilities of Rachel Saker

The Applicant agrees to follow the protocols outlined in the attached SUP and to abide by the following **additional requirements**:

- Provide a digital map in PDF format at 300 dpi. In-cave sketches will be drawn at 20 ft/inch and drafted at same unless different scales are approved in writing by the SCCi project representative
- Provide a digital version of all data (provide scans of survey notes at 300 dpi), maps, photographs and reports generated as part of this project to SCCi for unrestricted use; maps and photographs remain the property of their creator(s)
- Provide a brief digital report of each project trip before conducting another trip (email acceptable)
- No collection of samples or cave specimens is authorized under this MOA
- No permanent modification of the cave (except as described in the SUP) is authorized by this MOA
- **Emplacement of permanent fixed rope(s) is(are) not authorized under this MOA**; any request for permanent fixed rope(s) must be submitted as a separate SUP in accordance with the SCCi Permanent Fixed Rope and Permanent Anchor Guidance Document dated October 26, 2018 (attached); as a reminder, SCCi's default *minimum* standard for permanent anchors is two, 3/8-inch diameter, 2-3/4-inch long, 304 or 316 stainless steel wedge anchors with 304 or 316 stainless steel appurtenances
- Schedule the aid climbing and survey trips and coordinate activities through the preserve management team via the online permitting system

- Limit the total number of people entering the cave to a maximum of 12 people per trip, excluding any representative of SCCi
- Whatever else the SCCi Vice-chair or his/her designee(s) determines is necessary

Responsibilities of SCCi:

- **Steve Davis or his designee(s)** is(are) the designated SCCi project representative(s)
- SCCi will provide reasonable access to the property as determined through the preserve management team, or project representative, or their designee(s)

Attachments:

- SUP request
- Permanent Fixed Rope and Permanent Anchor Guidance Document

Accepted By:

Thomas Whitehurst
(SCCi Vice-Chair)

January 23, 2020
(Date)


(Applicant)

01/23/2020
(Date)



Special Use Permit Application



SCCi requires Special Use Permits (SUP) for all non-research activities that (1) fall outside typical recreational use of a preserve, (2) have the potential to impact preserves/caves, their natural or cultural resources, or (3) interfere with the visitor experience.

If you're not sure whether your proposed activity requires an SUP, please email permits@scci.org with the details of what you would like to do.

Examples when a Special Use Permit is needed include, but are not limited to:

- Any activity prohibited or listed as requiring a special use permit in an SCCi preserve management plan, visitor use plan, or policy. (e.g., group sizes that exceed limits; camping; disturbing, collecting, or removing artifacts, biota or geologic media (just to be clear, the mud that sticks to your shoes, clothes or gear is OK!), digging in the cave or on the preserve, modifying the cave passage, bolting of any nature, removal or replacement of existing bolts or rigging, use of rigging points other than those allowed, etc.)
- Cave exploration and survey. If you found a previously unknown or unexplored cave on an SCCi

preserve; discovered previously unknown passage within a known cave; want to do a lead climb to explore a high lead, dome, or canyon; or want to re-survey a previously mapped cave, you need a SUP. All new cave exploration will follow a “survey-as-you-explore” ethic, and that all cave survey activities will meet our current survey standards.

- Cleanup activities beyond the removal of typical incidental modern litter that may accumulate in caves and on preserves. A SUP is required for organized group cleanups; large-scale waste removal; or **ANY** graffiti removal, formation cleaning.

An approved SUP permits the special use and may have a duration of up to one year. A visitor permit is required for each time members of the team will be on preserve.

Please provide a brief summary of the project. Detailed information should be provided under the specific sections that follow.

Applicant

Rachel Saker

Abstract or Summary

In Feb. 2019, Lee White and Jesse Houser successfully completed an aid climb on the eastern wall of the Great Hall of Mysteries (GHM). Under Lee White’s Special Use Permit (SUP), permanent rigging was installed which can only be accessed by using a stick-clip and an additional section of static rope. At the time of this proposal, the rigging has existed in the cave for nearly one year without issue. The climb led to a dome room with multiple leads that were not yet accessed. It should also be noted that this dome area is near, but distinctly separate from, the Topless Dome. As expressed in Lee’s 2019 SUP, it is necessary for each of these leads to be vertically accessed and the passage beyond surveyed.

The goal of this project is to survey the upper dome room that was accessed in 2019, as well as investigate three major leads: 1) a large opening in the ceiling directly above the GHM, 2) a tall, broad void between rock layers on the north wall of the GHM, and 3) the high canyon intersecting the upper dome room. All new passage accessed as a result of this vertical exploration will be

surveyed upon discovery and reported to the SCCi via daily trip reports.
Based on pre-project reconnaissance, this project should not require the installation of any additional access ropes that reach the cave floor. The proposed climbs will be accessed from the cave floor via the pre-existing SRT route that was permanently installed under Lee White's 2019 SUP. Any / all permanent anchors (bolts, hangers, and connectors) and ropes will meet the standards set-forth by the SCCi.

Climbing activity above areas accessible to recreational visitors will be monitored by a team member on the ground to ensure their safety and the climb will not interfere with the normal activities of these visitors. Careful attention will be made to demarcate any potential hazard zones accessible to visitors. This will include the use of high-visibility "DANGER" flagging tape and posted signage altering visitors to overhead work.

Name of Project

Great Hall of Mysteries vertical exploration

Individual Responsible for Performing the On-Site Project Operations

Only enter if different than the permit requestor.

Name

Address

Phone

Email

Preserve(s) Requiring Access

Select all the preserves requiring access. Use the (+) to add another line. You will still need a visitor permit for each visit.

Preserve
Tumbling Rock Cave Preserve

Site
Tumbling Rock Cave

Financial Information

If the project is receiving funding of any kind, please attach a copy of the grant, contract, or other information relating to the amount of the funding, source of the funding, and duration of the funding.

Is the project receiving funding?



Financial Information

Additional Information Related to the Project

Please provide the following information.

Credentials of those conducting the project: Include information only on the individual responsible for the actual work. Include past projects conducted; expertise in the field in question; and educational qualifications.

Rachel Saker (NSS 69577): Project Leader

* Vertically competent with five years of experience

* Specialized in vertical exploration:

> Trained by Lee White and Mark Wingard

>> Contributor to Halfway House Dome climb in Gourdneck Cave (SCCi SUP)

> Completed >100-ft dome climb with project team

> Active projects include Big Rift climb in Proctor/Roppel (Mammoth Cave System)

>> Project lead/cartographer: Aaron Bird

* Surveyor / expedition member:

- > Cave Research Foundation (CRF) - Mammoth Cave National Park
- >> On-going member of team; over one mile of surveyed passage
- > Proyecto Espeleología Sistema Huautla (PESH) - 2020
- > Recent locally-run survey projects include Byer's Cave (SCCi), Perkin's Cave (VA), and fieldwork with the Tennessee Cave Survey (TCS)

* Bachelor of Science, Wildlife and Fisheries Sciences - Vertebrate Zoology (Texas A&M University)

- > Skilled at general identification of skeletal remains of extant and extinct fauna, particularly mammals
- > Current projects: assisting the paleontological survey of Powell's Drop Cave, KY
- >> Project lead: Western Kentucky University

Mark Wingard (NSS 66889, SCCi 3500): Chief Project Support

* Vertically competent caver with six years of experience

- > Proficient in permanent SRT rigging

* Specialized in vertical exploration:

- > Highly experienced in underground aid climbing techniques
- >> Participated in more than 10 tall dome climbs with Lee White throughout TAG
- > Major participant on Ouroboros Extension of Tumbling Rock (SCCi SUP)
- > Climb partner for Mount Stromboli Dome and Hans' Waterfall in Gourdneck Cave (SCCi SUP)

* Surveyor / expedition member:

- > Ouroboros Extension of Tumbling Rock (SCCi SUP)
- > Gourdneck re-survey (SCCi SUP)
- > Tears of the Turtle system, MT - 2019
- > Main Drain system, UT - 2018
- > Proyecto Espeleología Sistema Huautla (PESH) - 2020

Jesse Houser (NSS 63751): Project Team Member, Advisor (permanent rigging and sustainability)

* Sustaining Member of the SCCi

* Professional rope access supervisor

Others participating in the project will be vetted by Rachel Saker, Mark Wingard, and/or Jesse Houser to ensure they have the proper SRT and/or rock climbing skills to safely participate in the exploration and survey efforts. Gear sherpas may be utilized periodically for horizontal-only travel through the cave to aid in the transport of materials and supplies. These sherpas will be vetted horizontal cavers recruited from local grottoes.

A description of the methods to be used to execute the project goals: Destructive or non-destructive methods, examples include: bolting; digging; other modification to the cave walls or passage; collecting samples, current or historic; photography; on-site examination; etc.

All passage will be surveyed with Grade 5 survey technique. Vertical exploration will be done using an aid climbing system with bolts as the primary type of fall protection. Additional fall protection including slings, rock threads with dyneema cord, and tricams may be implemented as-needed. All climbs will utilize a belaying partner (i.e., we will not be conducting self-belayed climbs) and will be conducted in a manner following standard rock climbing safety practices.

Should the project result in the discovery of additional passage, rope access will be permanently installed with rope and hardware (bolts, hangers, and connectors) that meet SCCi's standards for rigging. To mitigate the potential for unauthorized access to the project area, every effort will be made to utilize existing SRT routes to access any newly-discovered cave passage.

Blind leads (example: domes that "do not go") will be documented thoroughly via survey as well as photographs and/or video, and derigged at the SCCi's discretion.

A description of the data and the format in which it will be reported: what type of information will the project yield? Examples - Data, photographs, excavation and recovery of historic items, new passage? How and where will this be reported—in a paper for an institution of higher learning, a national journal or magazine, a specialty journal, only to the SCCi board?

The primary product of this project is a completeness to the survey, as well as the discovery (and subsequent survey) of new passage. The documentation of the exploration through the survey of the passage, as well as timely and thorough emailed trip reports, will be the primary records of the project and any resulting discoveries.

Number of entries: the number of times the property or cave must be entered. The number of entries, and the proposed date for each, should be included. A Visitor Permit is required for each visit to a Preserve. The Special Use Permit permits the proposed use not access.

Numerous entries throughout the life of the permit. The total number of entries will be dictated by how much passage is found, the difficulty of the climbs, schedules of the participants, and other similar factors.

Duration of each event: How much time will be spent on SCCi properties during each entry?
It is anticipated that each entry will last four to twelve hours.

Number of personnel involved: The number of persons it will take to conduct the project for each visit; and overall.

Three to eight people per entry for active climbing and/or surveying days, with probably no more than a dozen individuals participating overall. Gear sherpas may be utilized infrequently for horizontal-only travel to transport bulky supplies.

The proposed schedule: When will the project begin, when will it end, when each of the site visits be made.

The project will begin ASAP and end once each notable climbing lead has been explored and surveyed.


Additional Files

[SCCi_PermenantAnchor-FixedRope_guide.pdf](#)

Memorandum of Understanding

The MOU will be written upon approval of a Special Use Permit.

By signing below I agree to implement only those activities listed in this special use permit and in the manner as expressed in my application.



Status

Approved

Approver's Signature



Send Status Mailing?

No
Submit Application Yes
Last Updated On 2020-01-23

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SCCi Permanent Fixed Rope and Permanent Anchor Guidance Document

26 October 2018

Introduction

SCCi encourages exploration of caves on its properties in a safe and responsible manner. Visitation of explored and unexplored portions of these caves is allowed provided that impacts can be managed acceptably. It is recognized that, in some cases, passage may only be accessible via fixed rope left in place by an exploration team following an aid climb. In addition, artificial anchors may be desirable in places where no acceptable natural anchors are available.

With the proliferation of dome climbs and other instances where fixed ropes and artificial anchors are used to facilitate cave exploration in SCCi preserves the question of what to do with this rigging after the exploratory phase of a project is over arises. In some cases, a project results in discovery of significant passage lengths and features in a cave. The exploration team and/or others, including SCCi management, may want to allow routine access to the new finds for subsequent visitors and additional exploration. This document provides information on SCCi's expectations, and guidance on how the exploration team or others might address these expectations in order to receive approval for leaving permanent fixed rope available for use by future visitors.

Additionally, permanent anchors (usually bolts and hangers) are sometimes installed in areas with unsatisfactory natural features necessary for rigging vertical obstacles to allow routine access to a portion of a cave. This document also specifies basic SCCi hardware standards for installation of permanent anchors and rope, or replacement of non-standard hardware.

A Special Use Permit (SUP) is required for any activity that results in cave passage modification, specifically including setting bolts or other anchors. In addition, parties desiring to install permanent fixed rope must request a SUP covering that activity. **While the guidance provided herein is basic, the SUP provided by the permit applicant must provide detail regarding the manufacturer, type, size, and material of any hardware and/or rope proposed to be permanently installed.**

If a permit request for installing permanent anchors with or without a fixed rope is approved, a Memorandum of Agreement (MOA) will be issued to the permit holder detailing SCCi's requirements for the activity. This guidance document may be included by reference in an MOA involving setting permanent fixed ropes and/or permanent anchors.

It is vitally important for all stakeholders to know and understand these requirements before a project starts. In order to avoid misunderstandings and to facilitate compliance with guidance a summary checklist and SUP that may be used as a template are provided.

Wall climbing – before the project

Members of climbing parties should understand that not all climbs will be worthy of leaving permanent fixed ropes or anchors behind. The SCCi vice-chair (VC) or their designee(s) will determine if a climb results in a find significant enough to justify installation of a permanent fixed rope and/or anchor(s). The decision will be based on information provided by the permit holder and others familiar with results of the project. A discovery's conservation, aesthetic, scientific and recreational merits will be considered in making this decision.

If a climbing team thinks there is any chance a route might be considered for installation of a permanent fixed rope rigged to permanent anchors, the anchors at the top of the climb should meet SCCi standards (see below). This will eliminate the need to install additional, standard anchors at a later date, creating unnecessary modification of the cave passage.

Wall Climbing – after the climb: approval process for leaving fixed rope in place

By default, most initial MOAs for a wall climb will require that artificial anchors and other equipment be removed from the cave to the extent practical at the completion of an aid climbing project. However, if a party wishes to leave a fixed rope in place the process is as follows:

1. Use SCCi's online permitting system to submit an SUP request providing detail of what was found and any conservation, aesthetic, scientific and/or recreational value it might have, and describe how any vertical pitches will be rigged with permanent fixed rope.
2. This description must include detail on the anchors and ropes to be used for permanent rigging; specifically, the type of anchors, their manufacturer, size and material, and, if applicable, the manufacturer, type, diameter and construction of any rope to be used. In this context, the term "anchor" applies not only to bolts, but also hangers, chains, rings, quick links, etc. that might be attached to a bolt. The use of natural anchors is not encouraged, but may be proposed.
3. The VC or their designee(s) will review the request and either conditionally approve, disapprove, or request additional information before reconsidering the SUP and inform the originating party of their decision.
4. Final approval will be contingent on preparation and acceptance of a brief, written, Permanent Fixed Rope Management Plan (PFRMP) that will include, at a minimum, a named responsible party, a rope and rigging inspection schedule, and a process to reduce the likelihood of use of the rigging by unqualified persons. An example of a PFRMP that may be used as a template is included as an addendum to this document.

The PFRMP may be modified over time as necessary to incorporate best practices, solutions to unanticipated technical issues, personnel changes, etc., but **if any substantial provisions of the PFRMP, particularly the inspection schedule, cannot be met, any fixed rope must be removed.**

Hardware requirements -- permanent fixed rope installation

SCCi does not dictate equipment specifications for use in initial exploration activities (e.g., aid climbs) other than expecting the activity will be carried out in a safe and competent manner. However, since it is anticipated that fixed rigging for routine access may be left in place for a long period of time, and see significant traffic, robust gear will be used. Unless otherwise noted, permanent anchors and fixed ropes left in place will either be supplied by SCCi, or new rope and anchors that meet or exceed SCCi requirements will be provided by others at their own expense.

The default minimum standard for permanent expansion bolts will be two 3/8-inch diameter x 2-3/4-inch long, 304 or 316 stainless steel wedge anchors, with 304 or 316 stainless steel hangers. All hardware attached to bolts and hangers will also be made of 304 or 316 stainless steel. Fixed rope will be 11-mm diameter, synthetic, static rope. Anchors installed on pulldown routes will consist of two

bolts connected by 304 or 316 stainless steel chain and ring. All metals will be the same to avoid corrosion caused by galvanic action. Bolts will be installed properly in locations that reduce rope abrasion or can be adequately protected. Rope should not be rigged so that it hangs in flowing water.

Again, the SUP requesting establishment of a route that includes permanent fixed rope and the accompanying PFRMP should provide hardware details, including the brand, type, size, material and model of hardware and cordage to be used. Exceptions to the standards must be requested in the SUP and/or PFRMP. For example, it is recognized that in some cases the use of natural anchors may be appropriate.

Other permanent anchors

All permanent anchors installed in SCCi preserves should meet the same standards outlined above. It is recommended that any bolts installed in easily reached, high traffic areas (e.g., Neversink's two rig points) be ½-in diameter. Unless otherwise noted, permanent artificial anchors installed in a preserve will either be supplied by SCCi, or new anchors that meet or exceed minimum SCCi requirements will be provided by others at their own expense.

SCCi is replacing existing non-standard hardware on an opportunity basis. Individuals should not replace non-standard hardware, even with SCCi-standard gear, without an SUP and MOA.

Contact information

Questions about information in this document should be addressed to: vice-chair@scci.org.