

Great Saltpetre Cave Preserve Committee Meeting

December 8, 2016 – Jerry Brandenburg’s house

Committee Members Present:

Jerry Brandenburg
Neena Jud
Werner Jud

Bob Roth (online)
Dan Zubal (online)

Also attending:

Bill Carr (online)
Sean Cain
Richard Duncan

Patrick Gibson (online)
Janice Gott

Meeting started at 7:05 pm

Secretary’s Report:

WJ made a motion to accept the minutes from last month (amended to correct the date), DZ 2nd.

Caretaker’s Report:

Showerhouse has been drained for the winter.

Bill found the kitchen unlocked one day. Please be careful when leaving and double check the locks.

The absolute fire ban in Rockcastle County is over. We are back to the normal ban – no burning between 6am & 6pm and fires should be greater than 150’ from tree lines.

DZ made a motion to accept the Caretaker’s report, NJ 2nd.

Scott Pavey submitted a report:

He used a wheel (from the old z-turn) for the front gate. He will install it.

He has the recycling can enclosure.

Beavers have returned.

He sharpened the zero-turn blades, but we will need a new set.

When it is time to discuss re-roofing the Shelter, he recommends considering metal roofing (he has done some investigation).

Treasurer’s Report:

Income exceeded Expenses this month. Financial Report available upon request.

Income included *half of the proceeds* from DIM plus *an* additional donation mailed in after the event earmarked for Capital Improvements. Werner created a Capital Preservation Fund to hold these monies.

A motion was made to move the *Donations* currently in the Capital Preservation Fund into the People’s Bank Reserve Fund, and rename it Capital Reserve Fund. NJ so moved, DZ 2nd, all accepted, motion passed.

Question was asked about bill payments – online or by check (since new GSP checks had just been purchased)? Werner pays as many bills online as possible, but some places (like Eastern Rockcastle Water) just don't have the capability to take electronic payments. *Also many people are reimbursed for GSP expenses by check.*

There was a large spread in the Mt. Vernon Signal for a couple of weeks regarding proposed electric rate increases by Kentucky Utilities. It does not apply to us. Werner called Jackson Energy and found out they purchase electricity from Eastern Kentucky Power.

BR moved to accept treasurer's report, DZ 2nd.

Old Business

Road Repair grant funding: No new information. Grant application is still going through the process.

Draft update to the Strategic Plan distributed to those in attendance plus RKC Board, and GCG, BGG, DUG, COG Executive Boards. Subsequent online discussion was minor, about Advantages #8 Plans for growth.

It was decided in the meeting to strike Advantages #8 and correct formatting in a couple of places. Neena Jud made a motion that the Strategic Plan as amended shall be presented to RKC for approval. BR 2nd, all agreed, motion passed. See attachment. *(The next day, Neena realized this must be submitted to GCG to submit to RKC and emailed plan accordingly.)*

Wheelchair for use in Cave: nothing new.

The Lower Mondo repair: no materials acquired. Jerry is looking for a new window. Bill Carr advised that the plywood on the porch is not $\frac{3}{4}$ " thick, It is something less, but more than $\frac{1}{2}$ ".

Light on the American Flag: nothing new.

Article for Newspapers: Dan Zubal composed an article, received statistics and input. It was read during this meeting and two additional suggestions were made – to add a mention of RKC as the owner, and mention Open House in May.

This kind of an article can plant a seed that may grow into fruit for Friends of GSP.

More information about RKC and date of Open House can be provided in a subsequent article. It was decided to not start the Facebook event for Open House yet.

The Ticket House Bob Roth reported that Neena Jud expressed interest in being on the Committee. During this meeting BC offered to join the Committee.

Bob's first step will be to develop a history profile by next month. He will take photos and look around the building next Sunday. By the following month he would like to develop a questionnaire about the extent of work and send it out to get people's input. He would like carpenters to take a look at it also as there are some framing timbers that look deteriorated. JB is in favor of leaving in place all the stones that are currently engaged.

Measuring Wheel: Not yet returned. Jerry will email David Lee and request the measuring wheel back. Its value is about \$70.

New Business:

Display Case Neither Bob Dobbs or Jeff Young could make it to this meeting as they were both ill. Bob Dobbs forwarded Jeff Young's proposal for the Display Case which he shared with the GCG Executive Board at the last meeting. Also forwarded were comments by Danny Young. See attachment.

Jeff's proposal requires electric power to be available at all times for an infrared heater. Although the case is adjacent to a panel board, the main power to the Cave is switched off at the entrance. WJ stated that it is not practical to get power all the way back to Atlas Pillar. BC agreed that it would be a monstrous job.

Danny's suggestions were to include a temperature & humidity logger in the project, place a large desiccant pack in the case which could be refreshed in the oven, and utilize LED lights.

Discussions in the meeting included a suggestion to consider moving the Display case closer to the entrance – like at the entrance to Pig Pen near where the artifacts were found. This would require much less trenching to bury or conceal the wires.

The sketch of the Case indicated wood composite phenolic board. No one in the meeting knew exactly what that is, but all agreed that we prefer non-wood materials.

The fungus is growing on the artifacts because the spores have found a hospitable environment providing food (wood), moisture, and light/heat (energy source). A reduction of moisture and energy below the hospitable level will stop the growth of the fungus on the wood.

Relative humidity is the ratio of the amount of water vapor that is in a given amount of air at a given temperature divided by the total amount of moisture that it can contain. Warmer air can hold more water vapor. When the Cave breathes in in the summer, and the air cools down to about 55 degrees, it cannot hold all the moisture carried in, so some condenses on the ceiling and the walls of the Cave.

Apparently these infrared heaters are used in gun cases to keep the guns from rusting. This may work by raising the temperature of the air to retain the water vapor while raising the temperature of the guns and the case so that the water vapor does not condense on the surfaces.

We do not know how much moisture is in the volume of air proposed to be in the sealed display case. Therefore we cannot assess whether the desiccant packs can work.

It was suggested to acquire a temperature & humidity logger now and install it in the case we have to gather data while the replacement case design is being developed. All agreed. Werner will place the order through Danny's link and will contact Jeff. We decided to collect data monthly or quarterly and chart the information in a spreadsheet to look for patterns, and to create a baseline for what we need to improve.

Can an inert gas be injected into the case to displace natural air and thereby inhibit mold growth? Argon gas is used in the case for the Declaration of Independence. It is

also commonly used in double pane glass assemblies. The question remains as to whether it is practical for our application.

Can we plagiarize museum case designs from other areas with high humidity i.e. Florida or Panama?

Decision to use LED fixtures.

Janice will wait until the design is resolved and a materials list is developed to submit grant application to LUSH.

NJ made a motion to adjourn, DZ 2nd. Meeting ended at 9:12 pm.

**Next meeting will be:
7:00 pm, Thursday January 12, 2017 at Jerry Brandenburg's house.**

Calendar Summary

December 11, 2016

RKC meeting

The Great Saltpetre Cave Preserve

Greater Cincinnati Grotto

Blue Grass Grotto

Dayton Underground Grotto

Central Ohio Grotto

Strategic Plan for Great Saltpetre Cave Preserve

Mission

To provide, protect, and preserve a place where people can experience the value of caves and enjoy their discovery, exploration and history as well as their relationship to the environment. Great Saltpetre Cave Preserve offers opportunities for fun, education and participation to youth and adults.

Objectives

1. Improve relationships with our neighbors for mutual benefit and help.
2. Provide a safe, comfortable place for rustic & primitive camping with opportunities to experience the solitude of nature.
3. Continue discovery of the Great Saltpetre Cave and its scientific, exploration, and educational aspects.
4. Preserve the natural resource for future discovery and enjoyment.
5. Be known as a model preserve, an example worth emulating.
6. Ensure the Preserves finances are reliably and securely managed.

Obstacles

1. Insufficient volunteers and motivation & rewards for service.
 - a. Lack of younger stewards.
2. Interpersonal conflicts among the leadership negatively affect the enthusiasm with which volunteers become involved or maintain their involvement with the management and care of the Preserve.
3. Occasional negative perception by neighbors or community.
4. Driving distance for many volunteers.

Plans:

1. Recruit more volunteers
 - a. New Members: Take a new member caving, THEN introduce them to GSP.
 - b. Current Members: Promote new discoveries in Great Saltpetre Cave and scientific exploration & study.



- c. Canvas the members and create a database of skills, talents, and expertise.
- 2. Convert Suspicion to Support (Become Better Neighbors)
 - a. Continue working to further neighbor relations.
 - b. Continue updating history of the Preserve.
 - c. Write quarterly articles for Mt. Vernon Signal.
 - d. Continue Open House.
 - e. Pig Roast or something for neighbors.
- 3. Public Relations Program:
 - a. Cave Protection and vandalism prevention
 - b. Develop a brochure (tri-fold?)
 - c. Start a "Friends of GSP" program
 - d. Prepare a new map of the cave including a wider range of information.
 - e. Develop these outreach efforts for:
 - i) neighbors
 - ii) local area
 - iii) future partners
 - iv) parents/chaperones with school field trips
 - v) all others
- 4. Encourage Discoveries & Scientific Studies
 - a. Allow digging in approved areas following proper Archaeological procedures and protocol.
 - b. Require documentation.
 - c. Offer fellowships which include requirement for copies of all documentation to be shared.
- 5. Facilities and Infrastructure (list of projects)
 - a. Update Management Plan
 - b. Provide adequate sanitary facilities.
 - c. Repair or replace deteriorated asphalt entrance road.
 - d. Formal Educational Center for year round use.
 - i) Include appropriate equipment & furnishings.
 - ii) Requires an Educational Coordinator.
 - e. Refresh signage throughout the Preserve.
- 6. Development (Fundraising) - future resources
 - a. In all grant applications or other requests, express the needs in project terms.
- 7. Ensure the continuation of a caretaker living on the property.
 - a. Review long term plans and ideas with caretaker.
- 8. Develop Educational Programming for GSP
 - a. Expand School field trips, especially once we have a Formal Education Center.
 - b. Develop activities to use the property and to teach outdoor studies.

Advantages of adopting this Strategic Plan:

- 1. Improved communication
- 2. Focus effort & resources on issues of priority



3. Stimulate volunteers
4. Establishes goals and guidelines with which to verify and document consistency of stewardship
5. Establishes boundaries (limitations on activities)
6. Good for adaptation elsewhere
7. May attract funding for projects
8. Pro-education

Disadvantages:

1. Increased usage & management challenges.
2. Increased human resource needs.
3. Will need to review and update the Preserve's Liability Insurance Policy when moving forward with Plans.

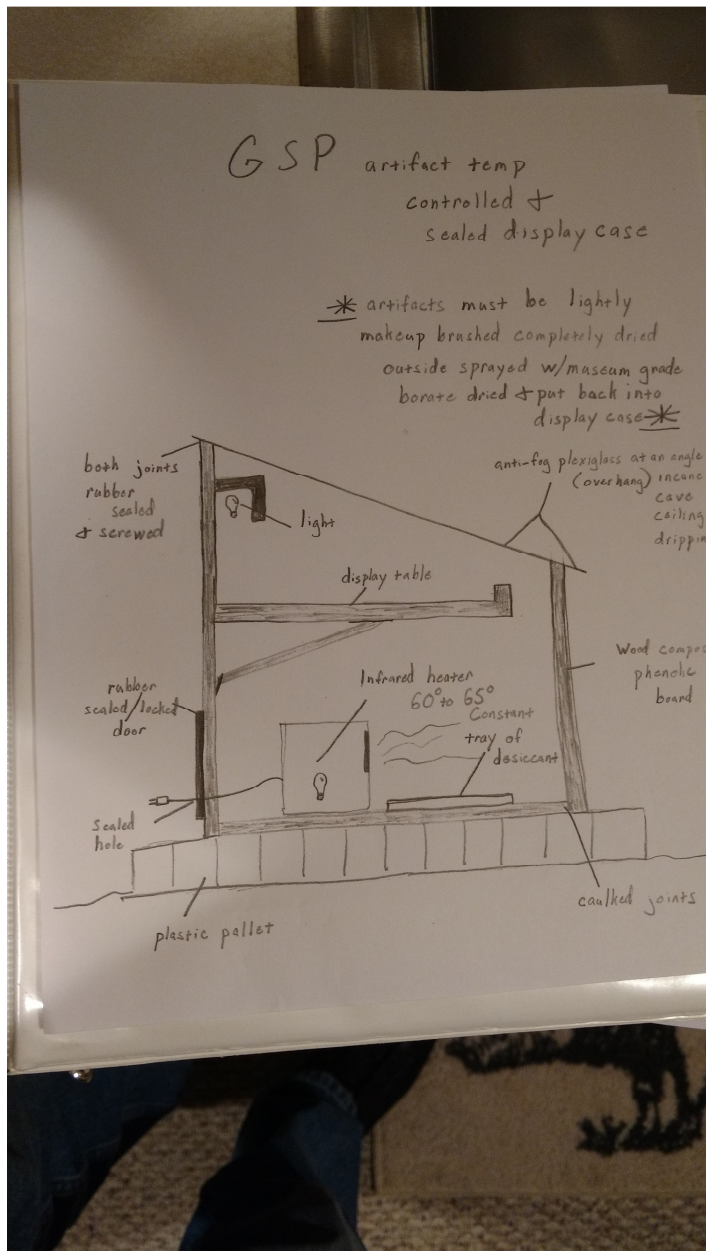
Action Steps:

1. Recruit Volunteers to Manage these (and similar) Plans.
2. Explain Strategic Plan to all stakeholders.
 - a. Grottos: Turn the Strategic Plan into a program for the Grottos.

Issued by GSP Committee to GCG for submittal to RKC on December 8, 2016.



Jeff Young's idea presented at the GCG Executive Board Meeting on 11/29/2016:



On Fri, Dec 2, 2016 at 10:52 AM, Daniel Young wrote:
Hey Jeff,

I was thinking about the display case you are designing and decide to do a little research too. This is what I found (it's your project so take this advice, or leave it, no worries).

I found a sensor that you could include that will stay in the case and monitor both Temperature and Humidity. It is battery powered and needs 2x AA batteries once per year to keep running (so just about any caver will have spares handy ;). It also is

bluetooth enabled so you can just walk up to the case and download the data without opening the case to check on it's status using your phone. It also has memory enough to log data every 15 min for up to 1yr. All in all it's a great deal and not too expensive. <http://www.onsetcomp.com/products/data-loggers/mx1101>

I also found a company that sells nicely packaged re-usable desiccants. They sell a larger pack in a metal can that would be easy to remove and re-charge in the oven. With the meter I showed above, you could log the humidity and check on it wirelessly whenever you are in the cave and use that to determine how often to change out the desiccant, or if you need to buy 2, or whatever. Since that size canister is designed for a very big space, I imagine it will do a good job keeping the case dry for several months, as long as the case is well sealed. The desiccant indicates when it's "full" with a change in color, but the meter makes checking this a lot easier.

<https://www.theruststore.com/750-Gram-Rechargeable-Silica-Gel-Canister-P57C6.aspx>

They also sell bulk gel in case you want to go that route and make your own oven-safe container to recharge it with.

Here is where i buy my LEDs for when i'm building lights. They sell all sorts of stuff, but thought this LED light strip would be a nice touch for your case. They are cuttable to length, run off AC directly, and can be attached to a dimmer in case they are too bright. <http://www.ledsupply.com/led-strips/ac-power-5050-led-strips>

Last thing is that I know that humid air is less dense than dry air, so the humidity in your case will always want to settle near the top. I think it would be wise to have the desiccant near the top of the case, so it has the best chance of keeping the case at a reasonable humidity level near the artifacts.

I think the meter and large Desiccant canister might make it so you could omit the electric heater, at least at first. Then the data it logs could let you know if you need to add heat, but my guess is you will be fine without the heater, this is what gun owners use a lot to keep their gun safes dry and prevent rust. Either way, at least this gives you some ideas on products that are out there to help you finalize your design.

Like I said this is my opinion, so take it or leave it. This is your baby.

With Regards,
Danny Young