

Coconino Forest Cave and Karst Management Meeting

July 31, 2013

1:00 – 4:00 pm Blue Ridge Ranger Station

AGENDA

- Greetings and Introductions -- Charlotte
- Cave Resources of the Coconino National Forest -- Polly (Quick Round Robin with Everyone)
- Caves of the Coconino NF – power point presentation by Ray Keeler et al.
- Coconino Forest Plan Revision Status and Cave/Karst Resources – Yewah and Emily
- Significant Cave Nominations, Past, Present and Future & the Nomination Process – Polly and Everyone
- Cave Inventory Status – Charlotte
 - Cave management files
 - Cave gate keys
 - Priorities and Needs for the Future
 - i. Cave and Karst Management Plan Status and Development – Arizona Grottos
<http://centralarizonagrotto.webstarts.com/> July 23, 2013 version
 - How to integrate a cave/karst management plan into the Coconino Cave/Karst Management program
- Memorandum of Understanding - Coconino National Forest and Arizona Regional Assoc. Nat. Speleological Society – Charlotte
 - National MOU signed April 2011
 - Forest MOU Development
- Sponsored Volunteer Agreement – Coconino National Forest and Arizona Grottos – Charlotte
 - Forest Wide SVA
 - Mogollon Rim SVA for 2013
 - Insurance
- To Do Items & Where do we Go From Here?
- Future Meetings

Cave Management Meeting – Wednesday, July 31, 2013

Attendees:

National Speleological Society:

Central Arizona Grotto (CAG) of the National Speleological Society

- Ray Keeler
- Rich Bohman, Conservation Chair

Northern Arizona Grotto (NAG) of the National Speleological Society

- Bob Goforth, Vice President/Treasurer
- Larry Zimmer, Conservation Chair

U.S. Forest Service

Washington Office – Minerals and Geology Management

- Johanna Kovarik, Cave and Karst Coordinator (attended via telephone)

Coconino National Forest

- Linda Wadleigh, District Ranger; Mogollon Rim Ranger District (attended for first hour)
- Polly Haessig, NEPA Specialist, Partnership Coordinator, Geologist; Mogollon Rim RD
- Charlotte Minor, Recreation Program Manager, Landscape Architect; Supervisor's Office
- Yewah Lau, Forest Planner; Supervisor's Office
- Janie Agyagos, District Wildlife Staff Officer, Wildlife Biologist; Red Rock RD
- Bill Noble, Wildlife Biologist, Four Forest Restoration Initiative; Supervisor's Office
- Emily Williams, Planning Specialist (note-taker); Supervisor's Office

Welcome and introductions

Context of CAG/NAG

- National Speleological Society (NSS) is a national non-profit (501-c3) organization, with smaller sub-sets of organizations under its auspices – regional, state, and local organizations.
- In Arizona, there is the Arizona Regional Association (ARA), a blanket association of all Arizona grottos/caving groups. In comparison to the Southwest Region and New Mexico groups, the ARA is fairly loosely-organized, with 2 caving trips, and one admin-type meeting a year. As that is the case, within Arizona, the individual grottos are the more organized groups.
 - Central Arizona Grotto (CAG) – Phoenix area, established in 1960 (53 years)
 - Northern Arizona Grotto (NAG) – northern Arizona area (Flagstaff, Prescott Valley)

CAG/NAG interest in Coconino NF caves

- to improve and make permanent the relationship between the caving groups and the Coconino NF
 - Avoid issues based on personnel turnover; would like infrastructure to be put into place to institutionalize relationship to better protect resource long-term
 - The Forest's cave resources are delicate artifacts, currently only protected by "secrets"
- To gain a better understanding of the geology and differences in cave resources on Forest

Caving groups shared a PowerPoint presentation (see end of these notes for presentation slides)

CAG/NAG shared information on caves & techniques:

- Several caves on the Coconino NF were discussed. Two caves are large, and from mapping done to date, are 8,000 to 11,000 feet or more in length. The Lava River Cave, a well-known recreational cave on the Forest, uses a CAG-developed cave map on its visitor information kiosk.
- Many caves on the forest are developed in the Kaibab Limestone formation but are accessed through sinkholes in shallow volcanic basalt rocks that overlay the limestone.
- Volunteers in the past have mapped entire cave systems, written short cave management plans, etc.
- Now COMPASS is a primary mapping program used by the CAG/NAG – older data from past volunteer efforts have been exported into COMPASS, which utilizes survey information imported into a GIS database.
- Ham radio used in caves -> underground to surface communication
 - Can use this method to find end of caves on the surface...locks down survey data within a couple of feet
- When CAG/NAG has helped with graffiti removal, they use a sandblasting technique.
 - They use glass beads, an inert substance that does not have a biological effect.
 - They carry out as much dust as possible so as to have as minimal effect on the cave as possible

CAG/NAG document: AZ National Forest Cave and Karst Management Plan

- 'how-to' document
- Useful for different users –not written for one specific cave system
- Useful for Arizona cave resources as well as for other states/areas
- Some info came from Coconino NF documents (2004), some from Tongass National Forest
- Information about:
 - Ground-disturbing activities
 - NEPA
 - cave inventory/evaluation and rating
 - look in appendix J for this information
 - Cave Opportunity Spectrum information
 - evaluation perception -> FCRPA categories (not FOIA-able) + safety/hazard issues
 - timber harvest area buffers
 - prescribed burn area buffers
- potential areas of controversy discussed in the Arizona Forest Cave Management Plan:
 - disease and contamination/decontamination procedures
 - CAG/NAG document contains “wash/clean gear after use” language, to communicate the importance of the idea of not transporting biological contaminants from one region to another
 - disturbing the ground
 - digging – removing sediment by hand, for exploration

- micro-shaving (uses a small amount of black powder)
 - has occurred on some National Forests for forest safety reasons (i.e. to allow for rescue)
 - micro-blasting – a tool/method that allows blasting
- management plan language: language that references “non-hard surface roads” assumes non-paved roads

GIS data

- CAG/NAG could probably supply volunteers to update the Forest’s existing GIS caves/karst layer
- Having an infrastructure in place (MOU, agreement, etc.) would help the Forest have a more comprehensive and accurate GIS layer - and make it possible to let CAG/NAG help to keep it maintained and updated

Discussed ongoing Coconino National Forest’s Forest Plan Revision effort (see FPR Talking Points at end of these notes)

- Regional Office is currently reviewing draft revised Forest Plan and Environmental Impact Statement
- Discussed strategic (versus prescriptive) nature of revised Forest Plan
- Explained “desired condition” plan component and that all future projects must either achieve or move toward achieving desired conditions
- Explained “objective” plan component – these are quantifiable, measureable goals and were chosen by Forest leadership as they were realistically achievable, given current/foreseeable budgets, staffing, etc.
- Collaboration/coordination is encouraged in revised Forest Plan language
- Once the draft revised Forest Plan is made available to the public for comment, CAG/NAG members were asked to consider revised Forest Plan language related not only to cave management, but also springs, riparian areas, and other resource areas.
- CAG/NAG members opted to sign up for electronic distribution list (see attached list)
- The Conservation Chairs of each grotto opted to sign up for NEPA electronic distribution list
 - This will allow them to be apprised of new projects (and general project locations) on the Forest
 - If the project area does include any known cave resources, the Conservation Chairs will make the project manager aware of the possible issue

CAG/NAG raised concerns about other Forest Service guidance related to White-nosed Syndrome

- Environmental Assessment in R2
 - If WNS is found, a buffer is enforced within 250 miles from source found, based on edge of county
 - Western counties are much larger – the size of the buffer could be problematic (El Malpais National Monument example)

- Coconino NF draft revised Forest Plan language currently refers to following established protocols for preventing disease spread

Are caving groups funded? If yes, in what ways are caving groups funded?

- NSS makes “exploration” and small grants available
 - For example, in Payson, funds were provided to install carbon dioxide monitors in local caves
- Currently, CAG/NAG not funded
- NSS is a 501-c3 non-profit organization, some grottos also have non-profit status
- NSS carries up to 1 million dollars in insurance

Existing Memorandum of Understanding (MOU) between NSS and USFS

- this document establishes a national framework by which NSS affiliated organizations can help the USFS with cave resources, as is stated directly in the document

CAG/NAG is interested in:

- An additional, individual MOU between the Grottos and the Region/Forest, etc.
- Although CAG/NAG requested a MOU, the Forest explained that a Master agreement with these external groups is much more effective in managing relationships, communication, data-sharing, and scope of work.
 - Allow both parties to do work
 - Both parties have official roles per the agreement
 - Agreement could incorporate language from existing NSS-USFS MOU
 - CAG/NAG is doing beneficial work on the ground
 - If research project, get a grant – then under the master agreement, a supplemental cost share agreement to authorize and guide projects would be developed, etc.
 - CAG/NAG really wants a **long-term** relationship/structure put into place
 - CAG/NAG wants to see files in SO/district, wants non-disclosure agreements for access to cave files for non-public information
 - Not sure, USFS personnel hasn’t heard of cooperators/partners signing a NDA before
 - Research folks may know more about this?

NEXT MEETING: October 18th, 3:00 pm – 6:00 pm

- **Location:** Camp Verde Ranger District (Prescott NF)/Red Rock Ranger District (Coconino NF)
- Meeting agenda:
 - details of draft proposed master agreement from Liz (Polly/Charlotte can email out to group for initial review)
 - any feedback on AZ NF plan
 - CAG/NAG wants something like this implemented on all forests
- Johanna will be on the call

Coconino NF Caves, Karst and Cavers

Some Structure, History and Help

Ray Keeler, Rich Bohman
Larry Zimmer and Bob Goforth
July 31, 2013

Central Arizona Grotto and
Northern Arizona Grotto of the
National Speleological Society



Goals and Objectives

- Reestablish communications between Coconino NF and Grottos in the Arizona Region
- Better understand caves and karst implementation requirements.
- Determine mutually acceptable cave management guidelines, and mitigation methods with respect to the karst impact

Topics

- Who are we, what is the NSS structure, and existing USFS/NSS MOUs?
- Caves and Karst on the Coconino NF
- Graffiti removal example in Lava River
- AZ NF Caves and Karst Management Plan
- Go forward recommendation
- Discussion on MOUs and helping

Who are we?

- National Speleological Society (NSS)
 - With about 10,000 members and 200 grottos, the National Speleological Society does more than any other organization to study, explore, and conserve cave and karst resources; protect access to caves; encourage responsible management of caves and their unique environments; and promote responsible caving.
 - The NSS and the USFS have a current signed MOU
- Arizona has 5 Active Grottos (local NSS organizations)
 - Arizona is a 'region' of the NSS
 - Central Arizona Grotto (CAG) is a Phoenix based Internal Organization of the NSS, and was founded in 1960
 - Northern Arizona Grotto (NAG) members are in Flagstaff, Prescott, Verde Valley, and several other northern commuities
 - Three other grottos are in southern Arizona and contribute many volunteers to caving projects.

The Arizona Region and Arizona Grottos have active, cave related projects with several land managers. These include:

- 5 of 6 Arizona National Forests
- Arizona State Trust Lands
- Grand Canyon National Park
- White Mountain Apache Tribe
- Private lands

USFS-NSS MOU

- Purpose:

“...to establish a national framework upon which the NSS and the Forest Service may cooperatively plan and accomplish mutually beneficial work projects or activities as they relate to the efficient management of cave and karst resources”

USFS-NSS MOU

National Speleological Society Shall:

- A. Assist the Forest Service in identifying, evaluating, managing, and protecting cave resources on NFS and other lands for the purpose of maintaining their unique, nonrenewable, and fragile biological, geological, hydrological, cultural, paleontological, scientific, and recreational values for present and future use.

- G. Participate in ongoing meetings, as necessary, to discuss and identify opportunities for cooperative work on mutually beneficial projects or activities for the promotion of cave conservation, research and education.

USFS-NSS MOU

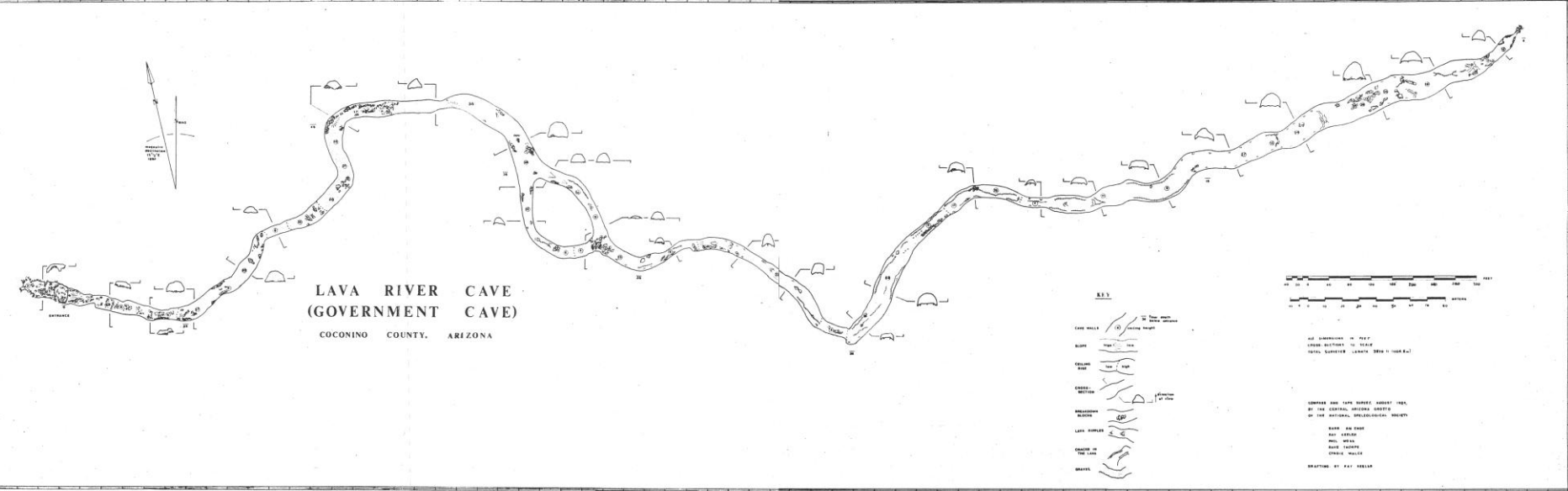
The U.S. Forest Service Shall:

- A. Recognize the NSS, its internal organizations, and knowledgeable cavers as natural partners in the collaboration necessary to manage cave and karst resources. Consultation with these groups and individuals is important because they are often the best source of information about caves, the primary special interest group, and the principal users of caves on National Forests.

- F. Participate in ongoing meetings as necessary, to discuss and identify opportunities for cooperative work on mutually beneficial projects or activities for the promotion of cave conservation, research and education.

Some Coconino Caves and Karst

What is the resource?




Lava River

Some Recent History – Lava River Graffiti Removal – September 2010


Summary of report and findings:

The Peaks Ranger District has organized a graffiti removal project to remove graffiti from Lava River Cave. During the 2010 summer, approximately 30 graffiti tags were placed in the cave. Until the 2010 taggings, the cave had remained essentially graffiti-free since the 1991 massive graffiti removal effort. The Peppersauce Cave Conservation Project (PCCP) offered an acceptable graffiti removal proposal, and enlisted The Arizona Regional Association (ARA) of the National Speleological Society (NSS) for trained volunteers. On the September 17-19 weekend, graffiti tags were removed from 3600 of 3900 feet of cave walls and ceilings using sand blasting and wire brushing.





Welcome to Lava River Cave



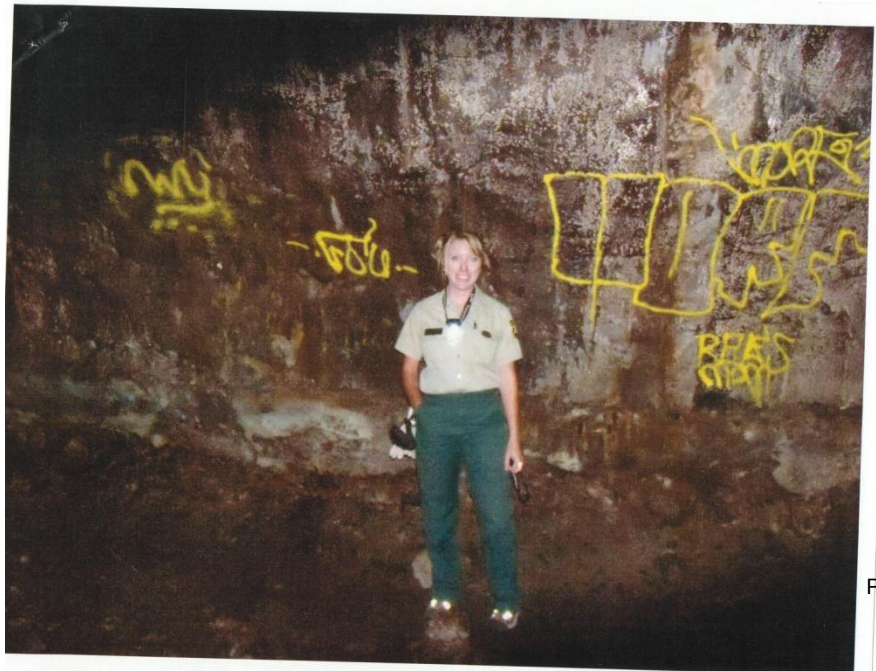
Recent vandalism in June, 2010 impacted the natural beauty of the cave and the experience for thousands of forests visitors. Volunteers from the Peppersauce Caving Conservation Project (PCCP) have assisted federal agencies across Arizona with graffiti removal and cave rehabilitation.

On September 18, 2010 PCCP removed the graffiti and provided visitors of the Lava River Cave a truly unique and memorable experience.

Please assist in the preservation of Lava River Cave by following some of these rules:

- **Pack it in, pack it out-** There is no trash service here. Diapers and broken bottles are a very serious hazard. Leave the cave in better condition than you found it!
- **Keep your dogs on a leash and remove their waste-** Stepping in piles of dog waste is no way to experience a cave. Recent injuries to dogs include a broken leg and other serious injuries.
- **Smoking-** Air exchange in the cave is very slow and smoke lingers long after you leave. Hundreds of cigarette butts are picked up from the cave floor every year. Please do not smoke inside the cave.
- **Human waste-** Human waste carries disease and ruins the experience. The cave is not a toilet.
- **Be prepared-** Most impacts are the result of poor planning. Understand what is involved with hiking under ground. The cave is a mile long and is not developed in any way.
- **Don't leave your mark-** Painting or marking the cave walls is extremely difficult to remove, and it's just not that cool.

If you would like to volunteer your services to preserve the Lava River Cave, please contact the
Peaks Ranger District Volunteer Coordinator @ 928-527-8213







ARIZONA EXPLAINED

Lava River Cave is aptly named

By John Stanley
Special for The Republic

Nearly 100 years ago, lumberjacks working the forests northwest of Flagstaff stumbled upon an extraordinary cave.

It was a striking reminder that not so very long ago (geologically speaking), much of northern Arizona was a hotbed of volcanic activity.

Cinder cones across the region belched a hellish mix of smoke, rock and ash into the air while streams of lava ran here and there beneath the surface. Some of those underground flows eventually hardened into tunnels.

In 1915, those unsuspecting lumbermen discovered what is still believed to be the largest such tunnel in Arizona.

The Lava River Cave is a popular recreational destination — easy enough for casual visitors, yet undeveloped enough for more adventurous outdoor folks to enjoy.

Geologists say the tunnel, known for a while as Government Cave, is nearly 700,000 years old. It was formed, they say, when molten rock erupted from a volcanic vent in the area now known as Hart Prairie. After the top, sides and bottom of the flow had cooled and solidified, the central part flowed out, leaving a hollow space behind.

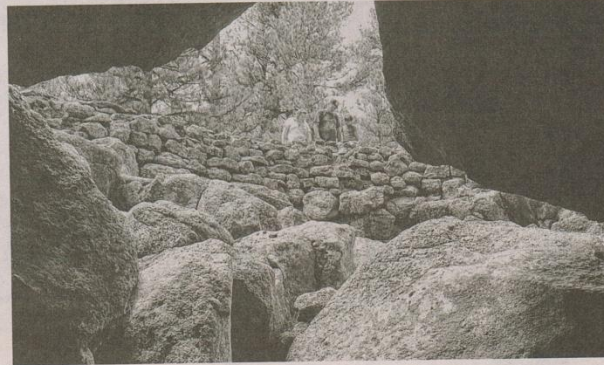
A rock fence surrounds the cave entrance — a sunken, roughly circular jumble of boulders. Refreshingly cool air greets you as you duck and clamber down into the darkness.

This is by far the roughest part of the trip. As your eyes are still adjusting to the gloom, you're making your way down a steeply sloping pile of loose rock, trying to watch your footing and not bang your head on the sloping roof.

It's much easier once you reach the cave floor.

The tunnel is about 30 feet wide in most places, with a more-or-less level central section flanked by narrow channels along the walls, much like the gutters on either side of a bowling lane.

The walls curve uniformly overhead, creating an impression that you're walking down a long-aban-



Lava River Cave is accessible enough for casual visitors but rugged enough for more experienced hikers. ROGER NAYLOR/SPECIAL FOR THE REPUBLIC

LAVA RIVER CAVE

Where: From Flagstaff, take U.S. 180 northwest about 14 miles. Just past mile marker 230, turn left onto Forest Road 245 and drive 3 miles. Turn left onto FR 171 and go about a mile. Turn left again on FR 171B and go about a quarter-mile to the parking area. The trail begins on the north side of the parking area. Take it about 50 yards to an old dirt road, then turn right and continue nearly 200 yards to the cave entrance. Forest roads may be closed because of fire restrictions in summer (none are in place at this time) or snowfall in winter.

When: All year.

Facilities: None.

Admission: Free.

doned subway tunnel or other man-made structure. The ceiling is fairly high, up to 25 or 30 feet in some places. But there are a few low spots where you will stoop over for a few steps.

To make your visit even more fun, bear to the right when the route splits about halfway in. The ceiling gets progressively lower, finally forcing you to crawl over rough rock for about 20 feet or so. (The less adventurous can go left at the split, avoiding the crawl. Either way,

Equipment: Each person should carry at least two flashlights and extra batteries. Headlamps will free up your hands; a hat will protect your head. It's humid in the cave, but it doesn't feel nearly as cold as the 35 to 45 degrees that most sources report. A light jacket or sweatshirt should be more than enough to keep you comfortable during your relatively short time underground.

Difficulty: Easy to moderate. The descent into the cave is rocky, steep and slick in places. But it's pretty easy going beyond the entrance.

Length: 1.5 miles round trip.

Details: 928-526-0866, www.fs.usda.gov/coconino.

you wind up in the same place.)

Unlike limestone caves, which usually hold lots of stalactites and stalagmites, lava caves are fairly featureless. Every so often, though, you'll come across places where giant slabs of rock have crashed down from the ceiling. Try not to think about it.

The cave comes to an abrupt dead end about three-quarters of a mile from the entrance. Allow about an hour for the 1.5-mile round trip.

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Navajo Na

Some of the ruins in Arizona are part of the National Monument. Three miles from the park, the Betataki site, a limited hike or backpacking trip. The park is on A.S. 160 at E. Details: 9

Hubbell T

Part of the museum is a grocery store through time stocked with clothing and a stove sitting on harnesses and hang from the ceiling. Working creak doors are few exceptions on the does in 100-graphs. The plays of his and lots of Churro she 264, about 1 There's no tours of the Details:

The Arizona National Forest Cave and Karst Management Plan

What is the Cave and Karst Management Plan?

- The document provides management techniques for caves and karst using USFS CFRs
- The CFRs are the policies (strategic). The Appendices are the tactical guidelines and implementation
- The plan is organized to be used by several different user groups
- **For Caves:**
 - USFS: training for new personnel, reference, guidelines, cave file management (public and non-public), research guidelines, inventory and classification criteria
 - Public recreation and caver/volunteer contributions
 - Research and monitoring categories

Existing frameworks

- From the Coconino NF Plan, Jan 2004, page 51:

Ground-Disturbing Activities

Surface land management decisions include consideration of potential impacts to all cave resources.

Any management activity planned near or within a known cave area is examined for its potential impacts to caves and karst features. This includes activities which might increase sedimentation, sterilize soil, change a cave's natural hydrology or water quality, add nutrients or other chemicals (including pesticides, herbicides and fertilizers), or modify the cave. Cave entrances and karst features are also not used as disposal sites for slash, waste rock or fill materials, and other refuse.

Maintenance of cave microclimate, hydrology, and entrance vegetation is needed in order to protect long-term cave ecology. In general, during project planning evaluate at least a 300 foot radius around cave entrances, infeeder drainages, and surface areas immediately over cave passages for the effect on cave resources.

Generally, major alterations to caves are not permitted. Following an excavation to locate an unknown cave, the condition of the original opening is mimicked so that air flow and wildlife use is not altered and the surface visual resource is maintained. Requests to locate caves using special excavation techniques (explosives, heavy machinery, removing large volumes of earth) are analyzed and considered on a case-by-case basis in compliance with the Archeological Protection Act and NEPA.

Caves of high resource values, and a suitable buffer area of approximately 1/4 mile from known cave passages, may be recommended for withdrawal from mineral entry.

Cave Inventory and Evaluation

Arizona National Forest - Cave & Karst Management Plan

Appendix C - Cave Evaluation and Rating

CAVE RATING SUMMARY

(For determining Cave Classification)

CAVE NAME: _____

EVALUATED BY: _____

DISTRICT: _____

DATE: _____

LEGAL: _____

CLASSIFICATION: _____

Recreation	Education	Biological	Geological	Cultural/ Paleo. Resources	Hydrologic	Safety- Hazard	COS CLASS APPX D	Cave Class APPX E

Appendix C - Cave Evaluation and Rating

Cave Evaluation.

Cave Classification.

Cave Rating Guidelines

- A. Recreational Resource for experienced cavers
- B. Educational Value
- C. Biological Resources
- D. Geological / Mineral Resources
- E. Cultural / Paleontological Resources
- F. Hydrological Resources
- G. Safety / Hazards

Appendix D - Cave Opportunity Spectrum for Caves (COS)

COS classes are used in cave recreation management

Appendix E – Cave Classifications

ENTRANCE RESTRICTIVE CAVES

SENSITIVE CAVES

LIMITED MANAGEMENT CAVES

OPEN ACCESS CAVES

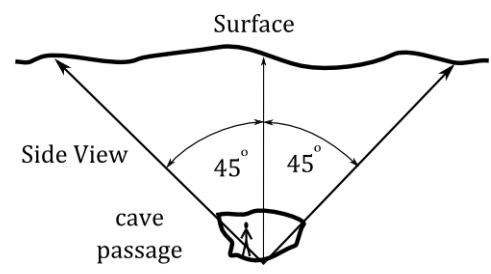
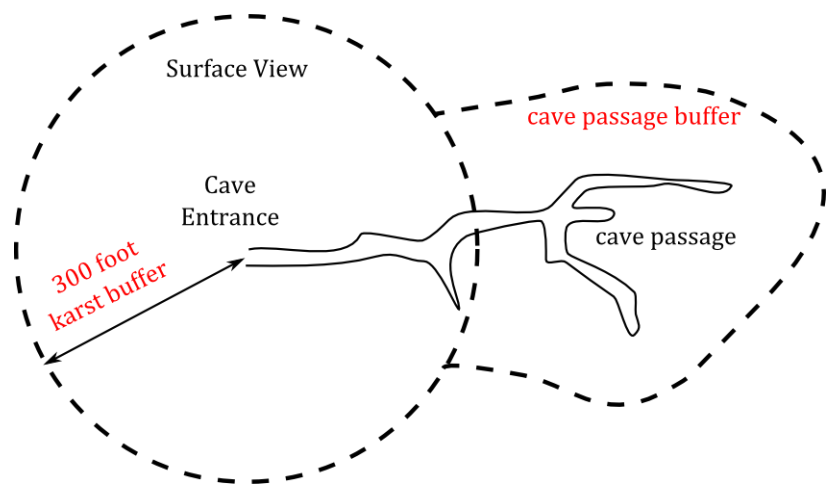
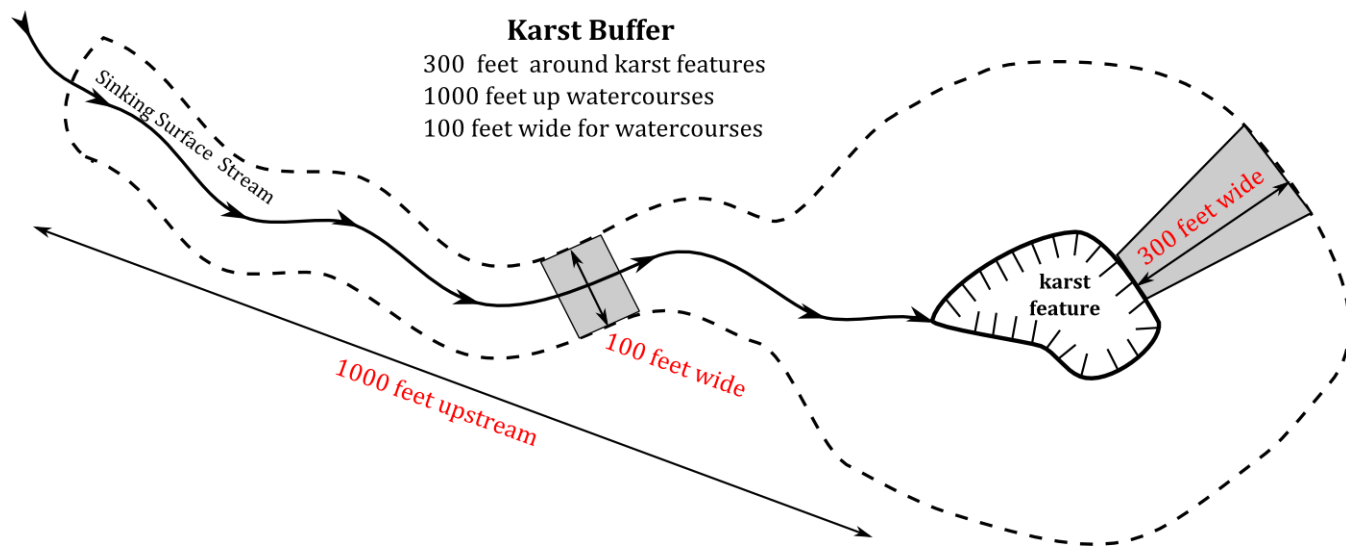
NON-SIGNIFICANT CAVES, SINKHOLES, and KARST

- For Karst:
 - Karst buffer zones, including management techniques for timber harvesting to mitigate nearby surface disturbance.
 - Some of these came from existing Coconino NF documents.

Existing frameworks

- From the DRAFT Coconino NF Cave Management Plan, Sept 1990, page 10:

6.4.10 Special Timber Practices - Timber practices which alter the surface ROS of highly developed, developed or natural caves should be avoided since the surface ROS is critical to visitors using these class of caves. Timber practices which make the entrance to primitive or near pristine caves more visible should be avoided since this might increase visitation to these caves which could alter ROS, and lead to resource impacts. Timber practices, above the surface or before the entrance of caves, which dramatically alter inflow of water which is critical to unusual mineral deposition, or supports important cave biota, should also be avoided. Timber practices in the vicinity of important bat roosts may affect forage for bats, but at present this needs more study.



Parallel Framework

- From the Chamberlain Analysis Area Environmental Assessment (Tonto NF, Pleasant Valley RD):
 - “Special action will be taken if caves are found in the harvest area. A buffer zone, with a radius of 150 feet, will be left around the entrance of a cave. No harvesting activities can occur within this buffer zone. Buffer zones around sinkholes located in harvest areas will be determined on a case-by-case basis.” [Page 12]
 - “A large and significant cave is located just outside of the analysis area boundary. Due to the size and varied topography and geology of the analysis area, other caves and/or sinkholes are sure to exist. If any others are located before project implementation, appropriate protective measures will be implemented.” [Page25]

Recommendations

- Formalize working relationship between Coconino NF and cavers
 - MOU between the Forest and the ARA and/or individual grottos is an option
- Maintain a 300 foot buffer around karst features.
 - Extend buffer the buffers 100 feet wide and 1000 feet upstream from karst features
 - Keep disturbance along other drainages to a minimum.
- Burn slash piles more than 300 feet from karst features.
 - CO₂ molecules are heavier and will stay longer in sinks and caves.
- Consider the creation of a Karst Preserve



Discussion

Cave/Karst Management
MOU
and other topics

Forest Plan Revision talking points for

Coconino Forest Cave and Karst Management Meeting with the central and northern Arizona grottos of the National Speleological Society July 31, 2013

- [Greetings. Introduce myself (Yewah Lau), and Emily Williams]
- Where are we in FPR? [Ask if there is anyone new who is not familiar with FPR.] In 2010 and 2011, we asked the public for input on the development of our draft revised plan. Using the feedback we received, we have been working on the draft EIS for the draft revised forest plan and 3 other alternatives to that plan. We are continuing to adjust the DEIS for our revised plan and alternatives to address internal review comments, but we think we're getting close to having documents approved for printing.
- **We are expecting to release our DEIS and draft plan and begin the 90-day public comment period later this year.** We look forward to your feedback on our draft plan and alternatives and are interested in hearing your preferences for how you would like us to engage with you.
- If you are interested in receiving periodic updates about our forest plan revision process, especially the upcoming public comment period, please take a flyer and sign up to be on our email list.
- **The revised forest plan will have a very different look and feel than our current forest plan.** Whereas our current forest plan was very tactical, our revised plan is much more strategic. Lots of guidance is embedded in desired conditions, which is the focus of the revised forest plan. All projects will need to comply with desired conditions. Where determined necessary, objectives, guidelines and standards were developed to support desired conditions. While the plan is strategic, there can be additional documents outside of the plan, such as a cave management plan, that provide more details to help guide the management of a given resource.
- Both the current forest plan and the draft revised plan contain language to protect cave resources from disturbance related to recreation and other forest management activities. There are some differences, however, related to the plan being more strategic or more tactical. Another difference is that the draft revised plan includes language to encourage partnerships and public education related to protecting cave resources. We are interested in getting your feedback on our draft plan when it is released for public comment.
- **Of note: Our plan components, such as objectives (quantified, time-specific activities to be achieved under the plan), monitoring program, and analysis of our plan rely on some key assumptions, including static budgets.** Our leadership team was very deliberate to include activities it felt could be reasonably accomplished, given limited resources. These measurable objectives will be reflected in our DEIS analysis, but does not likely represent all the activities that will occur when the plan is implemented.
- Questions/Feedback?



Sign-in Sheet

Topic: Cave Management Meeting with Arizona Grottos
 Date: Wednesday, July 31, 2013
 Location: Mogollon Rim Ranger Station

Please Write Clearly

Name/Affiliation	Mailing Address	City, State, Zip	E-mail Address	How did you hear about this meeting?	Join Mailing List? Method?
Smokey Bear U.S. Forest Service	1234 Forest Lane Road	Flagstaff, AZ 86001	n/a	Coworker	Yes - Via the mail; I don't have an internet connection.
LARRY ZIMMER NORTHERN ARIZONA GROTTO	7840 E MANLEY DR. PRESCOTT VALLEY, AZ 86314	PRESCOTT VALLEY AZ 86314	noazcaves@gmail.com		E-MAIL
Robert Goforth	POB 50537 PARKS AZ 86018 [Parks]		goforthandcave@gmail.com		Email
RICH BOHMAN	3051 E. CORRIE DR	PHOENIX, AZ 85032	rbokman5@cox.net		email
Ray Keeler	26406 N. 43 rd AVE	PHOENIX, AZ 85033	RCKEELER@cox.net		email

Names and addresses on this sheet are considered part of the public record for this project and will be available for public inspection under the Freedom of Information Act. Providing contact information is optional.