SUMMARY MINUTES
PECOS DISTRICT RESOURCE ADVISORY COUNCIL
JULY 18, 2012
ROSWELL, NM

RAC Members Present:	BLM Staff
Steve West	Chuck Schmidt
Reginald Richey	Jeanette Martinez
George Farmer	Jerry Dutchover
Neal Christopher	Howard Parman
Tish McDaniel	James Savage
Gregg Fulfer	Adam Ortega
Alisa Ogden	Michael Bilbo
Jack Callaway	Randy Vinson
Steve Peerman	Jeremy Iliff
George Veni	Christopher Brown
Michael Hillman	
Joe Stell	

RAC Members Absent:	Scribe:
Robert Armstrong	Betty Hicks

Federal Official:	Public
Douglas J. Burger, District Manager	Kathy Peerman
	Ken Dowlin
	Jan Dowlin

JULY 18, 2012

CALL TO ORDER, WELCOME & OPENING STATEMENTS

Chairman West called the meeting to order and gave thanks to all for attending. Doug Burger relayed that the new members have been selected, two returning members (Steve Peerman and Neal Christopher and one new member (Robert Armstrong) who was unable to attend.

Field Manager Chuck Schmidt pointed out a map of the National Conservation Area (NCA) to orient all with parts of the tour to be taken later in the day.

Mr. West discussed the need for approving past minutes due to not having a quorum available.

Briefing on Ft. Stanton Snowy River Cave NCA – Steve Peerman

Mr. Peerman discussed the handouts available for all relative to his presentation, Ft. Stanton Cave and Conservation Area. A powerpoint presentation was shown and Mr. Peerman explained that the Ft. Stanton Cave was here for many years prior to the finding of Snowy River. A map of the cave area was discussed, showing the cave entrance, which goes up and under a mesa and the airport. The area around the NCA is signed by BLM. One of the entrances viewed is believed to be between 800-900 years old. There was not much archaic use by Indians, a possible sink hole, thus an accidental entrance.

It is thought that Indians visited due to the finding of cane torches in the ceiling area. Burn fragments are still left and some actual torches were found. It was visited by the soldiers in the l850's, as evidenced by finding actual signatures in the cave.

The Wheeler expedition in 1877 mapped the cave. This map was shown. It covered approximately 2.2 miles of passage. It was the 2nd cave west of the Mississippi to be mapped. The first was located in Missouri. Many more portions of the cave were found in more recent times. A new section was found in l958, and other areas were listed by date. In the Fort Stanton Cave Study Project a passage was renamed for Don Sawyer, the first cave specialist in the Roswell BLM office.

A picture taken in 1955 of a caver doing some exploring was shown. Also shown were formations covered with very fine crystals.

The cave drew much attention by cavers in the late 50's and in the early 60's much mapping was started. Lincoln Caverns is the best decorated, discovered in 1969.

Snowy River was discovered in 1971 by the Cave Study Project. Priority 7 passage was dug open in the 70's, named Menacing Dome. The digging was stopped and moved to another area. Lloyd Swartz visited and promoted re-digging in the coal chute and broke into more passage, dropping down to eventually Snowy River.

Mr. Peerman showed one of the first pictures taken of Snowy River. It was like nothing else ever seen. It had a pure white crystalline floor that enthralled all. As it had never been seen, it was decided not to touch it and go out and relay what was found. The information was taken to BLM and a Plan was developed for exploring and mapping this cave. The discovery was 2001 and the first exploration was in 2003. They were not sure about even stepping on it but it can be walked on without causing any damage.

A very good picture for the early expedition was shown. It was discovered that the cave ends in a sump where water fills the passage and it has been documented that water exiting through a spring comes out at Government Springs at Rio Bonito.

A Crystal Lake picture was shown, but it is not known what goes further under the water. Snowy River has very few passages.

Priority 7 was named after an interrupt in a computer system in the 70's. It took several hours to go through this passage and it was closed in 2004, being too dangerous. By mapping it was discovered that a side passage goes under the cave and a hole could be dug to establish another route. This was accomplished in June 2007, from Don Sawyer Hall to Mud Turtle Passage.

The shaft support system is now made from stainless steel and polyethelene panels. This should have no effect on the cave and last for many years. Panels weigh 40 lbs. and were carried a mile back into the shaft.

It was discovered the area was flooded, but eventually dried out. It looks like cauliflower up close. Exploring south, upstream, another side passage was found. Technical climbing techniques were used. They found Fallen Arrows Corridor, a small passage, and probably will not go into again.

They found a bed with a rusty prominence. This is the result of biological action in the cave outside of the sun. Species that exist nowhere else in the world were found. This causes the rusty result.

Another was Slab Dome, a large room. A passage called Dashed Hopes was found and was plugged with sediment. Icicle Aisle is a well decorated area. Manganese was found there.

A lower runway area was shown which goes under the airport. High Leads has not yet been explored. A photo of Garret Jorgensen, l8 years old, was shown.

On July 7, 2012, a team exploring found breakdown areas and had to go above to continue their exploring. Iron oxide was found in the area, possibly biological. All teams record all scientific information.

Another survey was done on July 13. Surprisingly, the Cave got larger. Large pieces of breakdown were found and Snowy River could still be seen. They named the area Restored Hopes near the end of survey. Cave cotton was found on the last survey, not common to see. The area is larger and larger.

Stratographic relationships are being studied. On 4/22/10 it flooded very quickly, in l-1/2 hours. (snow melt). It is wondered when it will flood again. It drained and filled in July (monsoons) and declined rapidly in December. The floor is very porous. Hydrological work is being done.

Question: What is the temperature?
Answer: 50-56 degrees.

It appears that Snowy River is only 850-1000 years old. It is not known why.
Rust belt samples have been analyzed. It is not completely understood what process is happening.

Bats in the cave were shown. Some don't live in caves, but live in the area.

Research is being done on what microorganisms are present due to human impact in the cave. Cultural studies are also being done, and also paleontological studies on bones found. Paleo-climate studies are also being done.

Resistivity studies were explained and after analyses were able to make maps. Micro-gravity studies are also being done.

Ground-penetrating Radar Studies and Electromagnetic Studies are also being done. Water filled passages beyond the end of snowy river were found using these techniques. It is not known where the water in Snowy River is coming from.

The decontamination station outside the BLM bunkhouse was shown in pictures. Special procedures are used.

The last picture taken by the survey team in the early hours of July 14, 2012 was shown. We were able to see about 400 feet further into the cave.

Question: How is the cave surveyed?
Answer: Compasses and laser range finders.

Stations are found and distances measured between, and then the elevation. There are three to four thousand stations in the cave. The longest site is 212 feet.

Doug asked about explaining the ability to explore and it was stated that it is not a recreational exploration.

Question: What about shoe changes?
Answer: One of the issues is changing into specific clean clothes that do not shed fibers. Soft soled shoes must be used. Special precautions must be taken when crawling.

Question: What is the deepest point?
Answer: 6-700 feet under airport.

Question: What happens when manganese oxide is touched?
Answer: It flakes off and must be cleaned up immediately.

Question: What do you do with what is dug out?
Answer: It is left there in a "spoils pot".

Question: Where is the funding?
Answer: The cavers pay for most themselves, BLM some. A Challenge Cost Share grant was applied for and they hope to receive to purchase supplies, etc.

Question: What is the goal of this project?
Answer: Scientists are looking into the possibility of biological finds being used for medicinal purposes. A large reason is that it is a water conduit and we want to find where it is coming from.

Core samples taken have not been analyzed completely as yet, due to costs, etc.. Much data can be gleened from the cave

The difficulty of explaining to people about exploring a cave was stated. A simulation is being developed to be made available on the internet to be able to see what is involved in this endeavor.

Question: What is the mechanism for conversation re management of oil well/water well drilling.
Answer: BLM is the manager and an agreement is being worked on. The surface owner owns the void space below ground. A "trespass" underground is possible. This is a national issue.

Cave Management on BLM-Managed Lands/White Nose Syndrome

Jim Goodbar, Carlsbad Field Office, discussed the caves on BLM lands. He discussed what karst is, the resources, the impacts of drilling and how the land is managed.

A karst is a landform in soluble rock types with features such as sink holes, streams, resurgences. The different types of caves found there were listed. These are all covered under 43 CFR Part 37 (significant cave determinations).

Biologic - new species of cave life were found in the potash country. Microbial biology.
Hydrologic – when it rains, the water goes through cracks, caves, passages, underground.
Mineralogic

Paleontologic – where animal bones are found
Scientific/educational – underground information
Recreational

Impacts were listed – oil and gas, construction, drilling, production, abandonment.

Carlsbad BLM produces 80 percent of oil and gas on federal lands in the United States. There are one million acres of known cave/karst land resource in the CFO.

As various impacts can occur, we must be particular where construction takes place. Depending on where placed, collapse, lost circulation can occur. Collapses during different aspects of production were viewed.

Illegal dumping occurs on the roads, as well as contaminated ground water.

Jim referred to 43CFR, Onshore Orders with Conditions of Approval (COA) such as special stipulations and special spill cleanup regulations.

How does BLM manage? With detection, avoidance and mitigation.

Detection – where are the cave/karst areas. Map was shown of areas in SE NM. CFO has mapped and delineated critical areas. Information is put into GIS and distributed to companies to let them know what information is needed. Maps, GIS and satellite images are used in detection. Field work plays a large part, finding sinkholes, and underground where the caves go.

A map of an area at mile marker 10, private surface/minerals was shown.

Avoidance - when known, locations are moved away from voids. Buffer zones are placed and locations can be moved up to 600 feet.

Mitigation – smaller locations, reduce cut and fill, multiple well locations on a single pad, no blasting, closed loop systems, lined berms, and leak detection systems were all listed as examples of mitigation.

If drilling into a cave, call BLM for required BLM actions. Procedures required at abandonment were also shown. Reclamation was explained, putting the land back as close as possible to what is desired. Pressure tests are done through monitoring to assure no leakage is occurring. Special drilling, casing, and cementing procedures are designed to protect karst resources and groundwater.

Dye tracing was explained. Fluorescein dye is required prior to drilling and a pre-flush will be conducted.

BLM's Best Management Practices (BMP's) are detection, avoidance and mitigation.

PUBLIC COMMENT PERIOD - Comments from the Public were called for and there were none.

White-Nose Syndrome - Mike Bilbo relayed that the disease began in NY in 2006. It has spread and since killed seven million bats. This has severe ecological implications. Cave specialists are looking to be sure whether or not it occurs in this area. It attacks hibernating bats. Only project workers are allowed to enter during the two-year moratorium now in place. National and state plans are in place for dealing with this issue.
Netting of bats is currently being done, looking for this disease. If bats are lost, the influx of insects will be very serious. This is being watched closely by many. A formal decontamination station has been instituted for the Ft. Stanton/Snowy River cave system.

Question: Is the Mexican free-tail bat, which is common in New Mexico, similar to the bat species in the eastern states that are being devastated by WNS?
Answer : Even though Mexican free-tail bats do not hibernate, and only hibernating bat species have been affected, all bat species are being looked at to see if the fungus is present.

The disease has stalled in Arkansas and has not moved into Texas as yet. It has been detected in western Oklahoma. The spread of the disease is a large concern.

What do we know about WNS? There is ninety-five percent mortality of those affected, it spreads rapidly, and more than six cave bat species are affected. Specific fungal infection is common to affected sites but still no evidence of bacterial, viral or parasitic cause.

We must have bats so many are doing monitoring and studying.

The fungus occurs in the skin tissues of hibernating bats. It is transmitted bat to bat and not known to infect humans.

Research priorities are occurring and much money has been allocated to this research. Identified priorities are timing and dynamics of transmission; persistence on bats or in the environment, susceptibility of bat species (migration).

There have been many accomplishments since 2010. Decontamination protocols were updated in June 2009 and June of 2010.

The State Plan is close to being finished. The US Fish & Wildlife is the lead agency.
That we are an adjacent state is the reason for the moratorium. The national plan is also being worked on. There are seven working groups in place.

There are 14 hibernating species of bats occurring only west of the Great Plains.

Photos were shown of what is being done in the District. Small teams go out to the cave sites and must be very careful not to disturb hibernating bats.

Development of a possible sinkhole was shown. Known hibernation sites are signed by BLM. All those entering the cave are permitted.

Photos were shown of the decontamination process of the people, clothing and gear.
All areas are segregated to keep any contamination from occurring. Much of this is done on pallets. Each person is responsible for their own gear.

It was explained that UNM and NM Tech are heavily involved with this science.

Mr. Veni stated that a study shows that bats save three billion dollars a year in decreased pesticide needed for agriculture.

Mr. Stell asked about a die-off that occurred in Carlsbad Caverns and was told that the cause was not exactly known.

The formal part of the meeting was concluded and adjourned for lunch. Following lunch the group was taken on a tour of the Ft. Stanton/Lincoln area, including the historical Fort area, riparian areas managed by BLM and the Ft. Stanton Cave area. The tour concluded at 4:00 pm.

Approved:

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Steve West, Chairman Date