

**ORDER OF THE REGIONAL FORESTER
CLOSING AN AREA TO ENTRY, TO WIT:**

Emergency Closure

**All Caves and Abandoned Mines on National Forest System Lands
in the Rocky Mountain Region**

Pursuant to 16 U.S.C. § 551 and 36 C.F.R. 261.50(a), the following acts and omissions are prohibited on all National Forest System lands, administered by the Rocky Mountain Region in the states of Colorado, Kansas, Nebraska, South Dakota and Wyoming.

1. Entering any cave or abandoned mine, regardless of distance or depth, except those areas listed in Exhibit A. 36 C.F.R. § 261.53 (a), (b) and (d).
2. Going into any cave or abandoned mine on National Forest System lands listed in Exhibit A or pursuant to the exemptions listed below, without decontamination prior to entry to, and departure from, said cave or abandoned mine consistent with those guidelines hereby attached and incorporated into this Order as Exhibit B.

For purposes of this Order "abandoned mines" are defined as those inactive mine openings and adits that are not situated on an unpatented claim under the 1872 Mining Law, and which are situated on National Forest System lands.

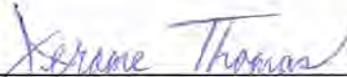
These restrictions are necessary to protect bat species from White-nose Syndrome. They are in addition to the general prohibitions set forth in 36 CFR Part 261. This emergency closure will be effective for one year, from July 26, 2011 through July 25, 2012, unless terminated earlier by the Regional Forester.

Pursuant to 36 C.F.R. § 261.50 (e), the following persons are exempt from this order while still subject to the procedures under Exhibit B:

1. Persons entering those caves listed in Exhibit A, which is attached and hereby incorporated into this Order.
2. Any Federal, State or local law enforcement officer, or member of an organized rescue or firefighting force working in the performance of an official duty.
3. Persons operating under the 1872 Mining Law are exempt from Prohibition 1.
4. Forest Service employees, contractors of the Forest Service, and persons with a written authorization from a Forest Service Officer specifically authorizing cave entry to conduct research, inventory, or monitoring as needed to understand and manage White-nose Syndrome and to contribute to the nomination of cave resources as significant under the Federal Cave Resource Protection Act (16 U.S.C. 4301 – 4309 and 36 C.F.R.290), provided said activities are consistent with Exhibit B.

Violation of these prohibitions set forth above is punishable by a fine of not more than \$5,000 for an individual and \$10,000 for an organization, or imprisonment for not more than six (6) months, or both. (16 U.S.C. § 551, 18 U.S.C. §§ 3559 and 3571).

Dated this 26th day of July 2011, at Golden, Colorado.



Jerome Thomas
Regional Forester (Acting)
Rocky Mountain Region, USDA Forest Service

EXHIBIT A

LIST OF AREAS NOT SUBJECT TO EMERGENCY CLOSURE

The following area is exempt from the prohibition on entry but is subject to the decontamination procedures in Exhibit B.

A. Wonderland Cave, Black Hills National Forest

Legal description: Section 27 of Township 4 North, Range 5 East, Meade County, South Dakota

EXHIBIT B

Decontamination Procedures for National Forest System Lands To Help Prevent the Spread of White-Nose Syndrome (WNS) Associated with Cave and Abandoned Mine Entry

USDA Forest Service
Rocky Mountain Region
July 26, 2011

Refer to and use these Decontamination Procedures for NFS Lands in the Rocky Mountain Region (Region 2). Also refer to the U.S. Fish and Wildlife Service's White-Nose Syndrome Decontamination Protocols for Researchers supplement at:

http://www.fws.gov/WhiteNoseSyndrome/pdf/WNSDecon_Researchers_v012511.pdf. These procedures are subject to change as national procedures are updated and released.

White-nose Syndrome (WNS) has been documented across the eastern United States and Canada and suspected most recently in Missouri and Oklahoma based on the discovery of the *Geomyces destructans* fungus believed to be the causal agent of WNS. The U.S. Fish and Wildlife Service recommends that recreational caving should not occur in WNS-affected and adjacent areas, to reduce the risk of human transmission of the fungus *Geomyces destructans* into new areas until WNS is better understood.

The Rocky Mountain Region is continuing to temporarily restrict access to caves and abandoned mines under its jurisdiction. A "cave" includes all caves and fissures whether they are known to be used by bats or not. A cave is defined under the Federal Cave Resources Protection Act of 1988 as "any naturally occurring void, cavity, recess, or system of interconnected passages which occurs beneath the surface of the earth or within a cliff or ledge (including any cave resource therein, but not including any vug, mine, tunnel, aqueduct, or other manmade excavation) and which is large enough to permit an individual to enter, whether or not the entrance is naturally formed or manmade. Such term shall include any natural pit, sinkhole, or other feature which is an extension of the entrance." "Abandoned mines" include inactive open adits, tunnels, and shafts, but do not include active mines where ongoing mining activities are being conducted. If entry into these caves and/or abandoned mines is necessary, take the following precautions to prevent the possible spread of the fungus *Geomyces destructans*.

You should not handle bats unless specifically authorized to do so. However, if you should observe live or dead bats that may be exhibiting characteristic signs of WNS, report this immediately to the nearest Forest Service office (<http://www.fs.fed.us/r2/contact/>), state wildlife agency (<http://www.fws.gov/offices/statelinks.html>), or U.S. Fish and Wildlife Service Ecological Services Field Office (<http://www.fws.gov/offices/>). Visit <http://www.fws.gov/whitenosesyndrome.html> for the most current information about the spread of this disease.

General Guidelines to Prevent the Spread of WNS

- **Avoid entry** into all caves and abandoned mines, and observe closures and advisories.
- **Do not use gear that was used in a WNS-affected state** outside that affected state.
- **Decontaminate previously-used gear** immediately, store gear away, **and thoroughly** wash and decontaminate any surfaces with which these items may have come into contact (e.g., car trunk, duffle bag, etc.).

Caves. Avoid cave entry if possible. Clothing (including outerwear), boots, socks, harness/ropes, helmet, hardhat, fannypack/daypack, headlamp, flashlight, camera, and other gear should not be used in multiple entries in the same day unless the cleaning and decontamination described below can be performed between each entry. In situations where caves are known to be interconnected and have multiple entrances, decontamination is not required between entry at the various entrances, within the same day.

Abandoned Mines. For the purposes of this discussion a “site” may consist of one or more related underground mine openings and may be as large as several square miles. Under situations where surveys are being conducted in association with abandoned mine closures for human safety, and multiple sites are being visited in a single day in states currently undocumented as affected by WNS, containment and decontamination between each site may be impractical. Specifically for abandoned mine entry associated with human-safety closures, follow these guidelines:

- Avoid entry if possible. Limit entry to that necessary to safely perform required work. For construction this is typically less than 50 feet inside the adit or shaft.
- Follow the decontamination and containment protocol between sites if feasible. If decontamination is not feasible between sites, identify feasible opportunities for decontamination at the smallest possible geographic unit to minimize risk of contamination between locations. These geographic units could be hydrologic unit code boundaries (HUCs) or bat habitat use areas.
- Decontamination must occur no less frequently than at the end of each day.
- Protect the interior of vehicles with tarps, sheets, etc. if driving between sites without decontaminating clothing and gear.

Containment and Decontamination Procedures for Caves and Abandoned Mines:

- Entry will only occur with clothing (including outer clothing), boots, socks, harness/ropes, helmet, hardhat, fannypack/daypack, headlamp, flashlight, camera and other gear that have been *fully cleaned following the protocol below and rinsed prior to entry* to remove residue of chemical product used.
- *Minimize gear* taken in to a site.
- *Air monitors* are required safety equipment for underground abandoned mine entry. The manufacturer of your air monitor (**ESPECIALLY THE SENSORS**) must be consulted with prior to applying any decontaminant chemicals, to ensure that the sensors and electronic components are not compromised in any way. Follow the manufacturer’s recommended procedures.
- Tyvek® or other disposable outerwear, rubber boot covers, and latex rubber gloves may be used for each entry in lieu of decontamination procedures for clothing.
- *Companion animals* should be kept out of caves and mines as fungal spores could adhere to fur and be transferred to another cave.

Step #1 upon exiting a cave or abandoned mine:

- Thoroughly scrape or brush off any dirt and mud from clothing, boots, and gear and then place them in a sealed plastic bag or plastic container with lid to be cleaned and disinfected off site.
- Remove outer clothing prior to entering a vehicle and after/between site visits. A clean change of clothing is recommended.
- Surface-clean exposed skin with antibacterial hand sanitizer prior to entering the vehicle’s cab.
- Place disposable items (e.g., Tyvek® outerwear, rubber boot covers, and latex gloves) in sealable containers, to be appropriately decontaminated and disposed of off-site.

Step #2 after exiting a cave or abandoned mine:

A. **Submersible Gear** (i.e., clothing and equipment that can be submerged without damage): Wash all clothing and any appropriate equipment in washing machine or by hand using conventional detergents. Washing can be done in cold, warm or hot water. Laboratory testing has found Woolite® fabric wash to be the best detergent for this procedure. Rinse thoroughly, and then follow by soaking for a minimum of 10 minutes in one of the recommended decontaminating products listed below, then rinse and air dry. *Boiling items for 15 minutes followed by thorough air drying can be done in lieu of chemical treatment.*

1. *Footwear:* When safety permits, rubber (wellington-type) caving boots (which withstand harsh decontaminating products and are easily cleaned) are recommended. Boots need to be fully scrubbed and rinsed to remove all soil and organic material. Decontaminate rubber and leather boots, (including soles and leather uppers) with a product listed below for a minimum of 10 minutes, then rinse and air dry.
2. *Ropes and Harnesses:* It is the responsibility of each individual relying on life-support equipment, such as harnesses and ropes, to ensure that the decontamination protocols in use are chemically compatible with this equipment. In cases where safety following decontamination has not yet been evaluated, then ropes and webbing should be dedicated to one cave or not used at all to prevent the spread of WNS. **To date, only Sterling rope and webbing have been shown not to be damaged by the following decontamination protocol:** Wash rope/webbing in a front loading washing machine on the gentle cycle using Woolite® Extra Delicates detergent. Treat by immersion in a 1:128 dilution of Lysol IC Quaternary Disinfectant Cleaner for 15 minutes. Rinse in fresh, clean water for a minimum of two rinses and allow to air dry. Other products have yet to be tested for integrity after decontamination.

B. **Non-submersible Gear** (i.e. equipment that will be damaged by submersion):

3. *Cameras and Electronic Equipment:* If possible, do not bring electronic equipment into a cave. If practical, cameras and other similar equipment that must be used in a cave may be placed in plastic casing (i.e. underwater camera housing) or wrapped in plastic wrap where only the lens is left unwrapped to allow for photos to be taken. The plastic casing should be decontaminated using one of the appropriate products below. The plastic wrap should be discarded after use and followed up by decontaminating the camera surface with Lysol® Disinfecting Wipes, realizing this could damage the body of the camera.
4. *Vehicles:* In addition to gear, vehicles used to transport equipment can also harbor spores. Keep vehicles as clean as possible by taking extra precautions (e.g. storing gear in clean containers, bringing a change of clothes, conducting all work outside of the vehicle once in the cave) and decontaminating storage containers along with all other clothing, gear, and misc. equipment using the appropriate decontamination products below.

Recognized Decontamination Products. The following chemical products were tested in a laboratory setting and were found to be particularly effective against killing the more resistant, spore-form of *Geomyces destructans*, as well as the hyphae:

1. Lysol® IC Quaternary Disinfectant Cleaner - (A product effective at 1:128 dilution, or 1 ounce of concentrate per gallon of water.)¹

¹ Use of some products which contain quaternary ammonia, isopropanol, and other potentially harmful chemicals or boiling water in confined spaces needs to be approached carefully due to inhalation or contact risks of the product. Since products/procedures may also cause damage to clothing, gear, and sensitive electronic equipment, all users should be aware of these risks prior to entering cave environments. Use of personal protective equipment to reduce

2. Professional Lysol® Antibacterial All-purpose Cleaner (A product effective at 1:128 dilution, or 1 ounce of concentrate per gallon of water.)¹
3. Formula 409® Antibacterial All-Purpose Cleaner (Off-the-shelf concentrations as specified by label)¹
4. A 10% solution of household bleach - (A product effective at 1 part bleach to 9 parts water)¹
5. Lysol® Disinfecting Wipes (0.28 % di-methyl benzyl ammonium chloride)^{1,2}
6. Boiling water

Quaternary ammonium products such as 409 and Lysol cleaner must be properly disposed into a municipal water system (poured down a drain or toilet) or similar system to receive required treatment. It is illegal to dump these products on the ground. Follow the label instructions and do not wipe these products directly on your skin or surfaces that come in contact with humans, pets, bats, or other wildlife.

If using bleach solution, do not store dilution for more than 24 hours as the bleach will begin to break down once it is diluted. Store in opaque bottles as bleach also breaks down when exposed to sunlight.

Product guidelines should be consulted for compatibility before using any decontamination product listed under Section 3 on specific equipment. ***Also, detergents and quaternary ammonium compounds (i.e. Lysol® IC Quaternary Disinfectant Cleaner) should not be mixed directly with bleach as this will inactivate the bleach and in some cases produce a toxic chlorine gas.***

Show caves and tourist mines. For caves or mines identified in Exhibit A, provide education to visitors on caves, bats, and WNS such as is being conducted at Mammoth Cave (<http://www.nps.gov/macawhitenose.htm>).

Work with contractors, special use permittees, and concessionaires to enlist a decontamination process for all individuals entering show caves or tourist mines by implementing a combination of the following actions that best fits the situation and will be most effective:

- Closing these sites to entry for anything other than WNS surveillance during hibernation season (roughly from October 1 – May 1).
- Forbidding entry with footwear that has previously been in a cave or mine **OR** require footwear decontamination prior to entry at a provided/supervised decontamination station, **OR** sell disposable rubber booties to be worn in place of footwear.
- Forbid entry with clothing that has previously been in a cave or mine **OR** provide disposable Tyvek suits for sale.
- Forbid carrying accessory items such as water bottles, cameras, cell phones, daypacks in to caves or mines that have previously been in a cave or mine, unless decontaminated on site.
- Provide a decontamination station and personnel to run it.
- Restrict human entry in to portions of caves or mines used by bats any time of year.

contact with the product is strongly encouraged, particularly if extended contact is anticipated or as recommended by the manufacturer. Always read and follow the MSDS information and all safety/use criteria for every product used.

² The active ingredient is considered to be at the effective concentrations known to kill the conidia of *Geomyces* spp.; however, the efficacy of field application remains to be demonstrated. Any equipment decontaminated with this product should be used with extra precaution until laboratory results are finalized.

- Restrict human traffic to well-defined contained pathways that avoid opportunities for human contact with cave features other than the pathway.

As new information becomes available, these decontamination procedures will be updated. The most current decontamination procedures will be made available at Forest Service offices and will be provided to persons obtaining a permit or other administrative authorization in writing from an authorized Forest Service officer. A separate protocol will be provided to persons handling bats for research purposes.