

March 4, 2022

U.S. Air Force
Arizona Regional Airspace EIS
501 Butler Farm Road, Suite H
Hampton, VA 23666

Re: Tombstone MOA proposal

To Whom It May Concern:

I am writing to express my concerns regarding the proposed changes to the Tombstone MOA. In particular, please consider the following:

Disruption of medical evacuations

I am one of only 5 EMTs with Portal Rescue. We are all volunteers who are on call 24/7 to serve our rural community in medical emergencies. When someone calls 911 an ambulance is dispatched from Douglas, AZ, but it can take up to an hour for them to arrive. The Portal Rescue volunteer ambulance also travels to the scene, and it is our job to stabilize the patient and provide lifesaving care until they can be transferred either to the Douglas ambulance or to a medivac helicopter. The helipad at Portal Rescue is used for medical evacuations in about 25-30% of our emergency calls. This helipad serves a 400 square mile area and is the only way to get patients to a Level 1 Trauma Center in a timely manner. I can personally attest that if we had been unable to fly several of our patients this year, the outcome would have been substantially worse, and potentially fatal. The proposed expansion of the MOA is essentially a box drawn directly around the route taken by all our medical helicopters from Tucson to the Portal Rescue helipad. The airlift companies and pilots can decline to respond or turn around for any reason, including weather and hazards. The helicopters fly at low altitude, in the exact same airspace being proposed for jet training. They do not carry enough fuel to take a different route. I am very concerned that even the perceived threat of a close call with training jets will make our medical helicopters reluctant to respond when we need to airlift patients for lifesaving treatment.

Fire danger

The Chiricahua Mountains are one of the most vulnerable regions in AZ to catastrophic wildfire due to drought, steep terrain that funnels wind, and a buildup of fuels due to a long history of fire suppression. The vegetation in many of the canyons is extremely dense and packed with ladder fuels, making it too dangerous for controlled burns. Our Forest Service District Office has been pouring money and resources into the Chiricahua Firescape Plan in cooperation with local organizations to mitigate the fire danger and bring the forests back to a safer, more natural fire ecology. In particular, there is a very great buildup of fuels between the town of Portal and Cave Creek Canyon, which is situated such that winds tend to funnel down the canyon towards the town. If we have another wildfire before the Firescape work is finished it is very likely that it will result in high property damage and loss of life.

I have personal reasons to fear a wildfire here in the Chiricahuas. I saw the Horseshoe 2 fire up close, and heard the story of two firefighters who were caught in a firestorm, deployed their shelters, and were nearly killed during that fire directly from people who were there. The fuel load in many places is still just as high as it was in that fire. My husband is a wildland firefighter with Portal Rescue who has been with the first crew at a number of fires here, and I worry for his safety. I work up Cave Creek Canyon at the Southwestern Research Station, which is surrounded by thick vegetation between steep canyon walls. There is only one evacuation route for the approximately 100 people that work at SWRS during the summer, and it is a narrow road through thick forest in a narrow canyon. If a flare started a fire in Cave Creek in June, evacuation from my workplace could look like the evacuation from the Camp Fire in Paradise CA.

Finally, I want to address the comment, made to me at the scoping meeting by an AF official, that flares have never set a fire. This statement was dishonest or disingenuous at best. Denial is not a good way to build community trust, especially when the community already perceives the short notice period and remote location of the meeting as an effort to avoid public input. There are actually many examples of flares causing fires during aircraft training. For instance:

- The remains of flares were found at the site of seven separate fires after training by Air National Guard on July 11, 2017 in Oregon.
- Flares used by training F16s are the leading suspected cause of the Telegraph Fire in Arizona in 2021. This was the second largest wildfire in the USA that year, destroying 51 structures and burning 180,757 acres.
- A flare caused a fire at Camp Grayling, MI in 2015. It was quickly controlled only because the base had pre-existing fire breaks.
- Flares used by F-16s caused a wildfire in New Jersey in 2007, leading to 2000 homes being evacuated, 13500 acres burned and dozens of homes damaged.
- Military aircraft in the Gila area dropped flares directly over homes and inhabited areas in 2019. No fires were started but residents smelled the smoke and feared for their safety.
- Any incident in which an aircraft crashes is likely to start a fire. For instance, the Iraqi F-16 that crashed near Douglas in 2015 started a fire.

Given this track record, denial that flare use may cause fire is an unacceptable response. Denial that crashes may happen and cause fire is an unacceptable response. The only adequate response to this concern in the EIS will be a thorough analysis of the probable effects of a flare-started or crash-related fire in the Chiricahuas as well as a strong consideration of how the Air Force intends to address the financial impacts, firefighting resource strain, property damage, environmental damage, and human casualties of such a fire.

In addition, I am very concerned about the flares that fail to ignite and will litter the landscape. As an EMT I was absolutely appalled to read about the woman burned over half her body by a

flare near Fort Thomas, AZ. The Chiricahuas are a major recreational destination for families camping with children. Canyons filled with hiking trails, campgrounds, and families are no place for dangerous military debris. We regularly have field trips from local schools and busses full of kids. Dropping even one unignited flare here is as irresponsible as leaving a loaded gun out around children.

Disruption of sensitive research

I work as the Resident Research Scientist at the American Museum of Natural History's Southwestern Research Station in Cave Creek Canyon. We are one of the largest and longest established field research stations in the US, and many distinguished researchers have been conducting long-term projects at the station funded by taxpayers via NSF, NIH, and even DARPA over the years. Part of my job is to assist researchers in obtaining the numerous permits required to conduct their research and to make sure the research facilities are available to support their project. We have a number of outdoor live animal holding facilities that are subjected to yearly recertification via the IACUC (Institutional Animal Care and Use Committee) process. This ensures that all procedures with animals will avoid or minimize discomfort, stress, and pain to the animals. When our holding facilities are evaluated, the extreme stress caused by the noise of low jet overflights and sonic booms will have to be taken into account and may damage our certification. Even if we can retain our IACUC certification in these conditions, the noise may have serious negative impacts on the research being conducted. For instance, one of our researchers has a project that involves monitoring the levels of stress hormone (cortisol) in lizards under different conditions, and jet noise is known to strongly elevate cortisol in many vertebrates. Another researcher will be using our large flight cages for careful study of the ultrasonic navigation of bats, with sensitive acoustic equipment that may be damaged by overflights. Many scientists have already contacted me with serious concerns about how this proposal will damage their research projects. There are very few facilities available that have live animal holding facilities like ours, and these researchers do not have backup locations they can move their studies to.

Bird collision danger

The Chiricahua Mountains, and Cochise County in general, are a world-recognized birding mecca. You will undoubtedly receive many comments about the value of birding to the local economy and the potential negative effects on our bird populations. I want to point out another bird-related concern for increased jet training in this area: sandhill cranes.

Sandhill cranes are large birds that are not particularly good at avoidance maneuvers, posing a particular hazard to aircraft. The FAA Wildlife Strike Database has 180 records of collisions with sandhill cranes, 18 of which were classed as substantial damage. Most of these collisions occurred in Florida, because airports there are located in important crane habitat. However, this area is ALSO important crane habitat with 25,000 wintering in the Willcox area and additional aggregations wintering near Animas. The only reason there are not more bird strikes is that we have relatively few aircraft in the area with the cranes. Increasing training in the part of AZ where the greatest numbers of cranes congregate will pose a substantial strike hazard to the training aircraft. These birds tend to fly in the exact same altitude ranges proposed for training,

and a single bird is large enough to destroy a jet engine. In addition, the cranes are important to the economy of Willcox, which draws crowds of birder tourists that come to see the cranes and participate in the Wings Over Willcox festival. Any jet-crane bird strike event here is likely to have a large crowd of birding witnesses, all armed with binoculars and spotting scopes.

Chemical contamination from flares

Almost everyone who lives in the Tombstone MOA drinks well water, and our aquifers are fed from the watersheds of the Chiricahua Mountains. Flares are made of magnesium and 45% polytetrafluoroethylene, with fluoroelastomer (viton, fluorel, and hytemp). Polytetrafluoroethylene (PTFE) is a fluorocarbon “forever chemical,” so called because living organisms have no way of breaking down the toxic C-F bonds in these molecules. These chemicals persist in the environment indefinitely, contaminate water, and build up in the body. The health dangers of exposure to fluorocarbons are becoming increasingly evident in human populations around the world. PTFE starts to break down when burned at temperatures above 260C, and certainly will be partially combusted in the flare. However, this material does not burn cleanly, producing variety of highly toxic fluorocarbons including tetrafluoroethylene, vinylidene fluoride, hexafluoropropylene, perfluoromethylvinylether, and difluorocarbene radicals. I am very concerned about the contamination of our watershed with these chemicals from flare use, and I am also concerned about the effect on wildlife. Chemical contamination of an area frequented by a large community of scientists will not go unnoticed. I intend to add various fluorocarbon analyses to the water chemistry monitoring project that we are undertaking at SWRS.

In conclusion, I strongly oppose Alternatives 2, 3, and 4 and can only support Alternative 1, no change. The other alternatives show a reckless disregard for the people who live and work here.

Sincerely,
Michele Lanan, PhD
Resident Research Scientist
American Museum of Natural History Southwestern Research Station
Portal Rescue EMT