

19 September 2024

U.S. Air Force

Dear Sir or Madam:

We submitted comments two years ago during the scoping process. We are greatly disappointed by the Air Force having taken those comments and those of thousands of others and produced a Draft EIS that is both methodologically flawed and blind to the values represented under the Tombstone MOA. We do not have the time to review fully the hundreds of pages used to obscure the world as it is and as it should be, but we will comment on some of the aspects with which we are most familiar.

To summarize, our reaction to the Draft EIS is “You want to do WHAT?” next to an area that most of Arizona’s Federal legislators believe should be a National Park. And which is, not incidentally, the peaceful home for many, the location of important economic activity, and a region of extraordinary biological diversity.

ACOUSTICS

Section 3.4.3.1 presents calculations for low-flight events that assumes randomness. We live here (the Tombstone MOA); we think we have observed non-randomness: Pilots like to fly through certain areas, such as canyons. The Air Force in other sections emphasizes its experience in these MOAs. So, with all of its data, has the Air Force *actually* flown *randomly* over the Tombstone MOA? This is not irrelevant: Humans, Spotted Owls, and many other species like canyons . . . and live in them.

The Air Force notes, not unreasonably, that it would be a challenge to develop a sound profile specific to the entire region. What is unreasonable is that the Air Force has not made any effort to assess the acoustical environment of specific locations that would be illustrative. And the Air Force has had plenty of time since the Scoping Period to do so. Or, if the Air Force has done so, it has not provided the data. How much reverberation is there in a narrow canyon like Cave Creek Canyon in the Chiricahua Mountains? Does any such data support the use of the 45% swath (p. 3-32) or the values in Tables such as Table 3.4-3?

While presenting single-event calculations, the Air Force overall sticks to analyses that are of average sound (e.g., DNL). This type of information is useful if one is planning to live near an airport. We found no justification for the Air Force’s emphasis on average sound in comparison with single event noise. On p. 3-28 statistics with regard to human annoyance are presented for DNL. What about statistics that relate to human annoyance in relation to single event noise levels? That is, if a single-event sound (and physical proximity at 100’ AGL) that may last less than a minute occurs during a morning horse ride, what is the probability of “annoyance”? Further, beyond human annoyance, single-event sounds are well known to disturb wildlife greatly. Surely the wildlife sections deserve a realistic analysis of single-event effects, rather than a profile that reflects the sound averaged over the course of a day.

In a Draft EIS, an evaluation of cumulative significant impacts is required, and a heading to that effect has been dutifully provided in some parts of this EIS. However, there is no indication that the Air Force has considered a basic part of cumulative effects, the relevant comparison point. The Air Force likes to emphasize that the increase in sorties in the Tombstone MOA will be little more than 2x (e.g., Table 4.1-1, Appendix J-22), comparing what is being sought with what has been sought in the past. However, if one does not know the number of flights that have been flown year after year in the past, one does not know that it will be roughly 2x; in order to evaluate the cumulative section, one needs to know that it is not something much greater, like 5x or 10x.

So let us consider the threatened Spotted Owl. We propose that one question should be: Has the Air Force adequately evaluated the cumulative impact of projected single event noise levels that are distributed in historical and/or planned flight patterns (where flights occur, assuming randomness is not enforced; how often flights can occur in a time period, e.g., how many planes in a day) in terms of the annual cycle of the Spotted Owl? Understandably, quantifiable information on such factors is not available, but the Air Force must then provide a qualitative discussion. The Air Force concludes there will likely be no adverse effects, and yet the minimal literature cited does not support their arguments. For instance, the Air Force relies on Delaney et al. (1999), but that study found flushes of owls occurring within roughly 300' (100m) as caused by sounds under roughly 100 dB; where is the Air Force's discussion of the likely effects of its aircraft at over 120-130 dB from 100' or 500' AGL? It seems intuitively obvious that at some point aircraft causing the sound equivalent of a rock concert 100' over Spotted Owls will change the environment to what Spotted Owls will not tolerate, and yet the Air Force does not propose any safeguards in terms of the timing or frequency of such flights, falling back on simply promising that they will be rare. We acknowledge that we do not think that Spotted Owls are the most sensitive species to noise, but there should still be a discussion that is not "Environmentally Unsatisfactory," as this Draft EIS is (in particular, one that is not at such variance from the Forest Service's concerns about the effects of trail crews on nesting Spotted Owls) (we await the results of the Air Force's Consultation Process with the F&WS). We also note that the Air Force relies heavily on "ACC 2008," a source to which it provides no link and does not appear to be in the public domain; was it peer reviewed (seems unlikely).

The Draft EIS misstates sources, seemingly to diminish the effects of its proposed actions. For instance, on p. 3-81, bird hearing is summarized as "In comparison to humans, birds typically hear less well over a narrower frequency bandwidth (Dooling and Popper 2007) [why is the Air Force citing a consulting firm report?]. The majority of the published literature on bird hearing focuses on terrestrial birds and their ability to hear in air. A review of 32 terrestrial and marine species reveals that birds generally have greatest hearing sensitivity between 1 and 4 kHz, and very few can hear below 20 Hertz (Hz) (Beason 2004)." Compare that to one of the leading Ornithology text books: "The hearing range of young humans (alas, it commonly lessens with age) is generally considered to extend between 20 Hz and 20 kHz, while a similar rule of thumb for birds is 300 Hz to 8 kHz (Gridi-Papp and Narins 2008)" (Morrison et al. eds. *Ornithology: Foundation, Analysis, and Application*. Johns Hopkins University Press; p. 356). Furthermore, as the Air Force's source states, "That is, with the exception of some nocturnal predators, birds hear best in the spectral region of their species-specific vocalizations" (Dooling and Popper p. 22); thus, the Brown Creepers and Grasshopper Sparrows breeding in the Tombstone MOA hear the 8-11 kHz songs of their conspecifics very well, while other species have excellent hearing of vocalizations under 1 kHz. And as Morrison et al. make it clear (e.g., in Chapter 14), while there are some limits on the avian

ear, that ear is also able to distinguish an extraordinary amount of detail in what they hear. We suspect that the Draft EIS's analyses of the senses of other organisms are similarly diminished in pursuit of a "no harm, no foul" conclusion to the EIS; for example, the range of mammal hearing is from infra-sound to 100 kHz (Morrison et al. p. 356). The final EIS must have an accurate and thorough evaluation of the effects of the proposed actions on all wildlife.

WILDLIFE IN THE TOMBSTONE MOA

The Draft EIS is a relentless effort to minimize or deny the significance of anything for which the Air Force might be responsible. Thus, on p. 90, in its synopsis of the Wildlife, the Draft EIS lists the common mammals and birds as "black-tailed jackrabbit, . . . , coyote, . . . black-throated sparrow, . . . [and] red-tailed hawk," with a few sexier species ("mountain lion"), but still a cartoon-caricature of a list of species that occur from California to Texas or Florida or Maine. We have previously provided the Air Force with the reference to an excellent summary of the center of the Tombstone MOA, the book *Cave Creek Canyon: Revealing the Heart of Arizona's Chiricahua Mountains* (Brown and Peters, eds. (2014)). The expert material in that volume makes it clear that the Tombstone MOA contains as much biodiversity as any comparable region in the United States. Nowhere in the Draft EIS does the Air Force even acknowledge that fact, let alone carefully analyze the potential damage it proposes.

But beyond the extent of the biodiversity lies another fact inadequately recognized by the Draft EIS. The local economy benefits greatly from the visitors attracted by that biodiversity, along with the many who simply come to hunt, hike, bike, and otherwise enjoy the qualities of the actual Wilderness Areas in the Tombstone MOA and the sense of peace and wildness that the area otherwise can provide (think $dB \leq 35$).

IS THE AIR FORCE AN HONEST PARTNER?

The Draft EIS states on p. 3-30 that:

- Aircrew would avoid congested areas, such as a city, town, or settlement, or open-air assembly of people, by a minimum of 1,000 feet above the highest obstacle within a radius of 2,000 feet in accordance with 14 CFR 91.119.

That means that around Portal aircraft would need to be from 1,200 to 1,940 feet AGL in Portal (the latter figure as measured from the Forest Service's Cave Creek Visitor Information Center). Flights through Portal do not remotely comply with that and never have; we doubt that they ever will. If the Air Force included any data on the number of complaints it has received (i.e., evidence of "Annoyance"), we missed it.

THE DUTY OF THE AIR FORCE TO COLLECT AND SHARE DATA

Ultimately, we are afraid that our plea will need to be to the judge who will receive this matter if the final document is not greatly improved. We will ask that many of the lapses identified by us and others through this process be rectified, and we will ask most particularly that the Air Force's

unwillingness to monitor itself be replaced with a series of requirements that the Air Force turn over on a regular basis sufficient data to an independent monitor to assess compliance. Such data should include the extent of non-randomness of low-level flights (both location and time of year) and actual sound measurements in sensitive and concentrating areas, all in conjunction with obtaining up-to-date information on the status of the important flora and fauna and the causes of any fires in the region.

IN CONCLUSION

The Air Force is proposing subjecting the human inhabitants (and visitors), the flora, and the fauna of the Tombstone MOA to a disproportionate increase in the overall flights in the region without any constructive explanation as to why there is no other possible way to conduct this training. At this point we are failing to feel a disproportionate increase in our civic duty to bear the downside of national security. We cannot identify anything that the proposed action will improve in the lives of the living creatures in the Tombstone MOA, while the disadvantages (even harms) are many. And this for a United States Air Force that is unwilling to conduct an in-person meeting in Cochise County over the Draft EIS.

Sincerely,

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