Unanswered Questions submitted to Michigan Air National Guard, incorporated by reference to comments submitted by Anglers of the AuSable in re: Draft Environmental Assessment for Modification and Addition of Airspace to Alpena Special Use Airspace Complex dated January 14, 2023:

1. Unmanned aircraft: we were advised that the ANG operated M29s in MOAs, either under constant radar or a chase plane. Can you advise which MOA(s) and confirm this is the only unmanned aircraft that would be operated by ANG. It was stated that the Army NG operated unmanned aircraft but only in the restricted areas. Please confirm.

2. Sound levels- We have asked for noise contour models for each of the aircraft with proposed sorties to be conducted in Grayling East, Grayling West, Pike West, VRs 1601/1602, R-4201A/B, and ANG will try to provide.

3. Noise Complaint hotline-We were advised that noise complaints in the Camp Grayling area should be made to Camp Grayling and to the Alpena CRTC if outside Camp Grayling area. Please provide the phone numbers for each location.

4. Ordinance waste retrieval- Anglers asked if there were procedures in place to collect and dispose of the waste from delivered ordinance. We ask if the ANG response can be re-stated as there is confusion as to what these procedures are, particularly in relation to a 10% retrieval requirement.

5. Additional flights/Additional Aircraft- It was stated at the meeting that if a 'substantial' number of sorties over what was stated in the EA for each MOA, a new EA would be required. Is it possible to better define "substantial"? It was also stated that if additional aircraft not identified in the current EA were going to be deployed in an MOA, an additional EA would be required. An example might be if F-35s were flown in Grayling West (where they are not currently listed for sorties). Please confirm.

6. It was stated at the meeting that any additional JTEs to be added would be the subject of a new separate EA. Please confirm.

7. It was stated at the meeting that if the land expansion proposal was to be implemented, it would be the subject of a separate EA, and that EA would need to assess the cumulative effects of airspace use in effect at that time. Please confirm.

8. Aircraft flying in formation-We asked if the noise levels contained in the EA reflected aircraft flying in formation, and it was stated that it was presumed that the contractors who prepared the information would have accounted for this. Can you clarify and confirm?

Additional questions not asked at meeting:

9. VRs 1601/1602- While the flight paths that aircraft may travel before entering the proposed VRs was discussed at our meeting, can we clarify if VRs are used as an approach/return pathway only to and from R-4201A?

10. Transition between VRs and MTRs to MOAs-Can you advise whether an aircraft flying in a VR or MTR into an MOA with a higher flight floor than the VR/MTR must adhere to the flight floor of the MOA? How would that be accomplished if transitioning from a VR with 500'to 1500' parameters to Pike West which has a Flight floor of 6000'? Flight levels in Grayling West The EA contains a footnote on Pg 5 which states:

"The EA for the establishment of the Grayling Temporary MOA (MIANG, 2019a) assessed the airspace floor at 5,000 feet MSL for the temporary MOA, and so this is the floor used in this EA. However, the floor of the Grayling Temporary MOA may vary year to year as required by the Air Route Traffic Control Center, which has restricted floors to higher than 5,000 feet MSL in recent years. "

What was the rationale of the Air Route Traffic Control Center to keeping the flight floor above 5,000 ft MSL in the Grayling Temporary MOA?

11. Standoff Tactics- Can you explain what the standoff ranges for precision guided munitions are and the aircraft used for delivery? (EA Pg 7)

12. "Carried Forward"- (EA Pg 10, 29, 88)... "carried forward for further analysis in the EA due to the potential for reasonably foreseeable effects: ….. land use, water resources including coastal resources, biological resources, cultural resources, and socioeconomics and environmental justice".
Is there a trigger that starts this or is it mandatory?

13. Supersonic flight-This EA states there will be no supersonic flight (Pg 14). A number of the aircraft identified in this EA are capable of supersonic flight, correct? How will you ensure that an aircraft does not go over the speed which would qualify as supersonic flight?

14. E18-G aircraft-The EA states that the EA-18G aircraft were utilized in the Grayling Temporary MOA for 13 baseline sorties annually. Proposed in this EA are 5 flights each in Grayling West, Grayling East, 4201A, and 4201B (Pages 20,24,25) and 20 flights in Pike West (Page 23) a total of 40 flights in the MOAs. There are 64 flights proposed for VRs 1601/1606 (Page 26), where the proposed flight floor/ceiling is 300 to 1500 feet AGL. Are the flights proposed in Grayling West, Grayling East, 4201A, 4201B and Pike West **in addition to** the 64 flights listed for VRs 1601/1602-i.e are these 64 flights just supposed to occur in the VRs and not deviate into adjoining airspace in Pike West, Grayling West, and 4201A? Or do 40 of the 64 flights deviate into neighboring airspace in Pike West, Grayling West and 4201A?

14a. At what speed will the EA-18G aircraft be traveling in VRs 1601/1602?

15. F-35s- It is stated in the EA (Pg 6) that the 'primary users' of the Alpena Complex would conduct exercises in A-10 and F-16 aircraft, however, it is also stated that the

Alpena CRTC airspace must be capable of satisfying the training requirements of fifth generation fighters such as the F-22 and F-35.

While the Grayling Temporary MOA was utilized for F-35 aircraft at a 5000 ft floor level in the past, no F-35 aircraft are listed for proposed flights in Grayling West, Grayling East, R-4201A, R-4201B MOAs or VRs 1601/1602. Can you confirm that there will be **no** F-35 aircraft utilized in these areas?

16. F-22s etc- There are no proposed flights for F-22 aircraft. When would you anticipate this aircraft or any other additional fifth generation aircraft would be introduced in this airspace?

17. A-10s-F-16s- A-10s/F-16s

The EA states (Pg 8):

Low-Altitude Training Requirements

Both the 180 FW and 127 WG, as well as most flying units deploying to the Alpena CRTC, have a Ready Aircrew Program requirement for Low Altitude Step Down Training and Low Altitude Air-to-Air Training. Both types of training must occur below 5,000 feet above ground level. The A-10 and F-16 have varying low-altitude certifications down to 100 feet AGL.

The only current "low" airspace is Grayling Range, which is too small, and the Pike East MOA, which is over water. While overwater low airspace is useful, it must be matched by overland low airspace to provide low-level training opportunities when Great Lake environmental conditions prohibit overwater flights.

(MIANG, 2019b)

Training for the A-10 and F-16 aircraft has been successfully carried out for many years in the existing airspace. Can you explain what has changed for LOWAT and LASDT training for these aircraft?

17a. With the anticipated divestiture of the A-10, will the ANG still be training pilots on this aircraft in this airspace in the next 3-4 years?

18. Chaff and Flare- It is stated in the EA that expenditures will occur at 1000 ft in 4201 A/B (Page 27). Why are these releases at 1000 feet lower than the MOAs (2000 ft)? Can you confirm that chaff and flare are not released in any VRs or MTRs?

19. Air Quality- If there is only 1 ambient air quality monitor in the study area, how has the "attainment" designation been obtained below 3000 feet for all locations? (EA Pg 35, 36)

20. JLUS- The Joint Land Use Study with Alpena CRTC and Camp Grayling reportedly called for a "noise study" in addition to other actions. Has such a study been conducted? Completed? Be accessed (where)?

21. Ldmr and Lmax Values- From what source were the values stated in Table 4-2 obtained (EA Pg 62, 66)? Was the BLAM (Blast Analysis and Monitoring System) utilized? Are they annual averages? Are they ambient values (i.e. with no aircraft sound involved in the measurement)? Or are they combined?

22. Why is an average of sorties used instead of actual numbers of sorties in Section 4.4.1? (EA Pg 61)

23. The Appendix I document only references changes for flight levels below 3000 ft AGL, is that correct? It continually references a "Noise Appendix" but we are unable to locate it in the Appendices. Is there a Noise Appendix and can you provide?

24. Has the military conducted any studies of the response of airborne organisms (e.g., birds or bats) to EMR?

25. JTEs generate a "high-density radio frequency environment": Have any studies been conducted to evaluate the impact of "high-density radio frequency environments" on airborne organisms?

26. Low Altitude flight: Spring and fall bird migrations occur at up to 1400 m with high densities at 300 m to 600 m. Has the military conducted studies of the impact of low altitude flights on migratory bird populations?

27. Page 24- Table 2-12 Existing and Proposed Annual Sorties and Time in R-4201A: There are 110 fewer F-16 sorties (2nd line) in R-4201B than R-4201A, why?

28. Page 7 – R-4201B modifications:
EA notes an increase in volume above MSL to accommodate "longer release ranges of training ordnance, in keeping with current Precision Guided Munitions tactics; which generally occur about 9,000 feet MSL. Laser and weapons employment, which are inherently hazardous ….".
Is the employment of training ordnance and lasers within R-4201B or R-4201A?
28a. Is training ordnance live or inert? If live, what types of ordnance? How much?
28b. What types of lasers are used and at what power?

29. Page 8 – Proposed VR-1601/VR1602 includes rotary aircraft.
What is the floor and ceiling altitudes for helicopters?

30. EA, Page 20- Table 2-4 Proposed Annual Sorties and Time in New Grayling West MOA:
AV-8B- what type of training, which military groups?
30a.MC-12- what type of training? What type of surveillance?
30b.MH-60- what type of training?
30c.CH-47- what type of training?

31. Page 36- Regional Air Quality; Aircraft generate a wide range of combustion products, for example, the F-15 and F-16 will generate approximately 270 lb. to 290 lb. of NO_x during a 1-hour flight, among several other compounds. A total of 1100 sorties will produce approximately 297,000 lbs. of NO_x.

Do training flights occur during ozone action days?

31a. Has the MIANG conducted air quality monitoring within areas with concentrated training activities such as R-4201A/B?

32. Use of live munitions: Has the NGB studied the concentration of toxins and perchlorates present at sites and in groundwater associated with live ammunition training activities?

33. Various sources list the size of chaff fibers used in the RR-188 cartridge as 1 mil or approximately 25 microns. What size measurement does the military apply to chaff fibers?

34. Range 40 appears to be located, at least partially, in Otsego County. The Hanson Deed from 1913 does not include any land in Otsego County. Can you advise when land in Otsego County was acquired by the military and by what method (i.e. deed, etc).