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Mr. Jamie A. Flanders
Airspace Manager
NGB/A2/3/6/10TA
3500 Fetchet Ave
Joint Base Andrews, MD 20762

Re: *Proposal by the Michigan Air National Guard for Modification and Addition of Special Use Airspace at the Alpena Combat Readiness Training Center; Alpena, Michigan.*

Dear Mr. Flanders,

The Aircraft Owners and Pilots Association (AOPA), the world's largest aviation membership association, submits the following comments in response to the initial proposal by the Michigan Air National Guard (ANG) for the modification and addition of Special Use Airspace (SUA) at the Alpena Combat Readiness Training Center (CRTC) at Alpena, Michigan. First, AOPA is appreciative of the ANG communicating to the FAA that the Hersey Military Operations Area (MOA) is no longer needed. Airspace is a finite resource, so we appreciate the relinquishment of SUA no longer needed for military purposes. We also appreciate the ANG and AOPA conversation on November 2nd to review the proposal.

Subsequent to that conversation, AOPA has had conversations with multiple affected airport managers, the chief flight instructor of a local flight school, a charter operator, and numerous locally based pilots. We have included their local expertise, experiences, and concerns in this letter. Although AOPA strongly supports the ANG and understands their need for training areas that reflect modern battlefield requirements, we are concerned the new SUA will have an adverse impact on IFR and VFR aviation in Michigan in terms of efficiency and safety unless mitigations and alternatives are implemented. In an effort to begin a dialogue on opportunities for improvement, we provide the following feedback.

New permanent airspace must be justified

Historically, the Grayling Temporary MOA has been utilized about 40-45 days per year. This year's activation was for 39 days which is an amount of time that we do not believe warrants permanent charting. AOPA does not consider activation 11% of the year to be regular use in accordance with JO 7400.2L, *Procedures for Handling Airspace Matters*. Temporary MOAs have less of an impact on General Aviation than the permanent charting of SUA. The military proponent should provide a more detailed explanation of why this area is necessary for regular use and for more than just the limited Large Force Exercises it has been used for in the past. We contend it would be appropriate to continue utilizing Temporary MOAs to accomplish ANG's seasonal goals.

Charting new SUA will in of itself have an adverse effect. Although AOPA encourages members to educate themselves on how to safely navigate through MOA airspace, we know from a previous survey that 73% of General Aviation pilots deviated around SUA. A survey taken in 2005 revealed that 68% of General Aviation pilots deviate around SUA whether activated or not. As you know, AOPA is conducting a survey of our members on SUA awareness and knowledge in early 2019, and we plan to share the results with the SUA proponents.

We must also question the justification for new permanent SUA when the utilization of the existing SUA appears to be poor. The October 22, 2018, *Draft Environmental Assessment (EA) for Establishment of the Grayling Temporary MOA* states the following utilization rates:

- R-4201A has a utilization rate of 18% of the total available hours of 2,080 per year
- R-4201B has a utilization rate of 0.3% of the total chartered hours of 2,496 per year
- Pike West MOA was utilized only 3% of the total scheduled time

Based on this information, it appears the ANG does not necessarily need new SUA but modernization of their existing airspace’s dimensions. Optimization of the SUA could improve utilization rates and nullify any new impacts to General Aviation. Low utilization rates and large differences between “scheduled,” “activated,” and “utilized” data must be explained.

Michigan’s economy relies on General Aviation

Michigan is popular for General Aviation operators with over 6,000 General Aviation aircraft based in the state. According to the 2017 *Michigan Aviation System Plan*, a Michigan Department of Transportation (DOT) report, General Aviation airports make up 84% of Michigan’s total airport system and generate over \$5 billion dollars of total direct impact, over 33,700 jobs, and \$1,441,634,000 in income. According to the FAA, General Aviation activity nationwide has been increasing with a 3.6% increase over the previous year in flight activity to 24 million flight hours occurring in 2015. The FAA’s 2018 *Administrator’s Fact Book* notes there are 14,308 active pilots residing in Michigan and 67,411 in the Great Lakes states. Michigan DOT is projecting steady increases in General Aviation activity in the state through at least 2040, similar to FAA projections.

The Northeast Region of the state, where the SUA expansion is most impactful, is the third most prosperous in terms of aviation’s contribution in Michigan. The airports in this region support over 8,300 jobs, \$291,003,000 in annual payroll, and \$1,445,289,000 in economic output, and account for 220 based aircraft and 74,000 annual operations. General aviation accounted for 71% of all operations in this region in 2015 and the majority (62%) were transient operators. Aviation operations and the number of based aircraft are projected to increase in this region by 11% and 14%, respectively, over the next 15 years.

The following table captures the number of aircraft, operations, and economic output of the airports that underlie the proposed airspace. The table does not include airports located adjacent to the SUA or private airports that may also be affected.

Airport	Identifier	Annual GA		Local Jobs	Local Payroll	Local Economic Output	
		Based Aircraft	Local Operations				
Alpena County Regional Airport	APN	20	2559	143	365	\$19,385,000	\$30,997,000
Atlanta Municipal Airport	Y93	12	700	700	2	\$82,000	\$147,000
Eagle II Airport	8M8		50	50			
Hillman Airport	Y95	4	706	706			
Huron County Memorial Airport	BAX	18	6500	3200	52	\$1,729,000	\$4,984,000
Iosco County Airport	6D9	23	2269	965	16	\$683,000	\$1,155,000
Oscoda County Dennis Kauffman Memorial Airport	51M	11	400	400	3	\$133,000	\$570,000
Oscoda-Wurtsmith Airport	OSC	31	3687	1843	2,437	\$125,065,000	\$550,804,000
Presque Isle County Airport	PZQ	5	570	380	13	\$566,000	\$1,826,000
Sebewaing Airport	98G	5	1000	1000			
	Total	129		27,823	2,888	\$147,643,000	\$590,483,000

These airports account for thousands of jobs and millions of dollars in economic value. Taxpayers have invested millions of dollars in these airports via the Airport Improvement Program. A significant investment is also made in these airports by local communities to ensure they are safe and to stimulate business. Scores of aircraft are located under the proposed SUA and are actively flying daily supporting these businesses and the community. Flights in this Michigan airspace are diverse and include recreation, personal travel, powerline inspection, business aviation, flight training, aerial application, air ambulance, aerial photography, and many other types of operations.

The enlargement of the CRTC SUA complex would have a negative impact on the smaller General Aviation airports in the Northeast Region which rely on accessibility. Flight schools, Fixed Base Operators, and airports underlying and near the proposed airspace stand to suffer from reduced business should this proposal not be modified. Fixed Base Operator's rely heavily on fuel sales and, should fewer pilots stop in because they are avoiding the MOA, their revenue could drop dramatically. Making it harder for visitors to fly to these smaller airports could hurt not only the airports but also the local economy. Increasing the size of the SUA in this area and the frequency of utilization will undoubtedly magnify the adverse economic effect on General Aviation.

We disagree with the ANG statement that there has been "no significant impact to nonparticipating users" by activating the Grayling Temporary MOA each year. There are costs associated with reroutes, including additional fuel expenses and flight time for aircraft operators. AOPA has submitted comments numerous times to the FAA noting these impacts. Our recent conversations with local pilots and airport businesses confirm there are negative impacts felt from this airspace. It is incumbent upon the proponent to directly address these real concerns and not dismiss them with unsupported statements.

Pilots need advanced notification of activation

We understand the proposal includes varying times of use:

Activation times for the Grayling Low MOA are proposed to be 0800-1600, Tuesday-Saturday, and other times by NOTAM. Activation times for the Pike Low MOA are proposed to be 0800-1600, Monday-Friday, and other times by NOTAM. Activation times for the Steelhead East, Center & West MOAs are proposed to be 0800-1600, Tuesday-Friday, and other times by NOTAM.

The proposal states activation of the MOAs could take place by NOTAM but fails to state how much advance notice pilots would receive. Pilots cannot adequately flight plan should this airspace be activated after they depart. Modern General Aviation aircraft can have over six hours of fuel endurance; however, having to deal with a long reroute can lead to issues of the pilot not having enough fuel and thus being forced to divert for fuel. At least four hours advanced notice is necessary to assist pilots with their flight planning and to help them avoid costly reroutes or the need for fuel diversions. This amount of time has historically been provided when the ANG utilized the Grayling Temporary MOA. Furthermore, the FAA states in JO 7400.2L, para. 21-2-4(b)(3)(e), "the minimum advance notice should be at least 4 hours prior to the activation time." Therefore, we believe the times of use should be changed to "...by NOTAM at least 4 hours in advance."

Any change in airspace configuration must coincide with the VFR charting cycles to ensure the flying public is aware of the change. Safety could be significantly impacted should the airspace change be made before the change is charted and widely disseminated to pilots. We appreciate the ANG's long-standing commitment to General Aviation to ensure these steps do take place.

Impact to highly trafficked airway

We are concerned about the loss of access and efficiency that will occur when the airspace is active and IFR aircraft are not be able to utilize popular routes. A significant number of aircraft traffic the routes connecting the southern half of Michigan with the northern half. According to the 2018 *Draft EA for Establishment of the Grayling Temporary MOA*, V78-609 accounts for 1,145 annual transitions of what is the proposed Grayling West and Grayling Low MOA. That would rank this segment just outside the top 100 busiest airway in the U.S. This is considerable use for an airway located in northern Michigan.

Due to Michigan's extreme winter weather and proximity to the Great Lakes, icing is a routine occurrence which necessitates an extensive route structure to accommodate low operating altitudes. Many General Aviation operators utilize single-engine piston aircraft because of the small airfields spread out across the state. These aircraft need the airways to be available as they offer the lowest minimum enroute altitude.

Impacting access to the north-south route will adversely impact small aircraft owners and businesses as it will increase the cost of flying by requiring circumnavigation. Alternative routes that go west around the CRTC SUA increase the miles flown and overall duration of the flight. Relying solely on routes west of the R-4201 complex will also increase congestion and delays.

Several pilots and flight training operators in the area utilize Cessna 172s. Flight planning for a Cessna 172 from Saginaw VOR (MBS) to Pellston VOR (PLN) via V78-609 results in a 129 NM or 1:06 hour flight. If these airways were not available, and an aircraft needed to stay on an airway to remain below icing altitudes, the flight would require the use of V133 and V233, increasing the flight by 20 NMs or 13 minutes. This would increase the cost for this flight by at least \$30. Multiplying that conservative amount times the 1,145 transitions per year results in an estimated impact of at least \$34,000 per year.

A charter operator based in the area utilizes a Cessna 208 to fly weekly charter flights to and from Mackinac Island during the summer months. Normally the cost is \$1,300 round trip but, should the MOAs be active and require circumnavigation west around R-4201, the cost would nearly double to \$2,300 round trip. Over the course of the summer, this one operator could see their cost increase by \$12,000 because of this airspace. These examples do not account for more operationally expensive aircraft that also fly these routes. There would be a significant reoccurring economic impact on the public.

AOPA noted in our 2013 and 2015 comments to the Grayling Temporary MOA that we believe the V78-609 airway must remain available for General Aviation pilots at all times. Consistent with our previous comments, we believe a revised MOA floor altitude of 7,000 feet MSL would allow IFR pilots to fly both east and west bound on V78-609 regardless of the MOA's activation. A floor of 500 feet AGL is not practical in a corridor of airspace frequently transited by IFR aircraft that need to routinely stay below icing conditions. Furthermore, we are aware air traffic control has noted efficiency impacts, as have our members, when the floor altitude was 5,000 feet MSL for the Temporary MOA. The negative effects would be considerably increased by dropping the airspace to 500 feet AGL.

As the FAA's VOR Minimum Operational Network initiative continues, additional legacy VORs and Victor Airways will be retired; however, attention must be paid in each instance of what the utilization is of the routes and what the impact to users will be. The PLN VOR will result in a loss of continuity of airways in the vicinity of the CRTC. To mitigate this foreseeable event, we believe a T-Route that overlies or closely mirrors V609's path to be necessary. The continued presence of a route in this location should be anticipated and accounted for as the ANG continues to analyze this proposal's impact. A request for the route must be coordinated when the PLN VOR's decommissioning is nearer, which is now estimated for Fiscal Year 2023.

Loss of IFR access to underlying airports during SUA activation

Numerous instrument approach procedures at airports underlying the 500 foot AGL floor would become unusable during Steelhead, Pike Low, Grayling West, and Grayling Low MOA activation. IFR access to numerous airports would be completely lost, and the approaches at airports adjacent to the SUA, like Gaylord Regional Airport (GLR), would become unusable. A floor altitude of 500 feet AGL has a significant impact on the viability of underlying airports and is not practical over areas frequented by General Aviation.

One airport particularly affected would be Huron County Memorial Airport (BAX). We do not believe the 2,500 foot AGL MOA exception area in the Steelhead Center MOA is sufficient to facilitate IFR access at this airport. There are charter operators based at this airport, numerous corporate flights throughout the year by NetJets, and instrument flight training conducted regularly. The exception corridor width and height is not sufficient. Local pilots confirmed they are normally not able to be radar identified by air traffic control until they are at least 2,500 feet due to surveillance coverage limitations. Routine IFR operations must not be affected at this airport given the economic disruption that would create.

AOPA understands the utilization of the MOAs with a 500 foot AGL floor would not take place when IMC conditions are being experienced at arrival-departure altitudes (below 3,000 feet MSL) for the underlying airports. The use of the established Low Altitude Tactical Navigation (LATN) area requires VFR conditions, as would many of the other missions being flown low-level. As the reality of the SUA is the low-altitude portion will not be scheduled during poor weather, AOPA contends the ANG should document a formal limitation in the airspace legal description to ensure non-participating IFR aircraft retain access at underlying airports when conditions otherwise do not allow a visual approach. There are several SUA areas already with documented operational restrictions such as what we are recommending (e.g., R-3004, R-6001, etc.). The description should state: “weather conditions required for aircraft activities are 5 miles visibility and with prevailing clouds or obscuring phenomena no greater than five-tenths coverage of the sky and bases no lower than 3,000 feet AGL.”

Airspace dynamic deactivation needs documentation

During preflight planning pilots can access SUA information via NOTAMs and schedule information via SUA.FAA.gov. If a pilot sees the SUA overlying their departure or destination airport, such as at BAX or Presque Isle County Airport (PZQ), is scheduled to be active, the pilot has no choice but to amend their flight to arrive before the SUA’s activation or after it is scheduled to be inactive. The General Aviation flying public does not have access to Letters of Agreement or other information that states air traffic control will coordinate with the military to give way to IFR General Aviation aircraft to allow them access during a SUA’s scheduled utilization. It is not reasonable to think a pilot will expend the money and time to fly IFR under the possibility the scheduled time in SUA.FAA.gov is incorrect. Pilots flying IFR are trained that they should plan to not have any access to that airspace when the SUA is active and will delay their flight if their destination is located below the SUA.

If there is to be “flexible use” or “dynamic deactivation” of the airspace formally documented with the FAA, that arrangement should be publicly disseminated so pilots can be informed that they will be provided egress or ingress to underlying airports with minimal delay. AOPA agrees this is a significant mitigation as it facilitates airport access, but only if pilots are told this is the case. Any arrangement must be noted for each airport in FAA publications utilized by pilots. For example, if it is the ANG’s intention to release Steelhead Center MOA when IFR aircraft are arriving or departing BAX, that must be documented so civil aircraft operators understand they will receive airspace access with minimal delay.

It must be acknowledged that pilots do not plan on flying to an airport IFR when the SUA overlying it at 500 feet AGL is scheduled to be active. Flights are delayed or even cancelled when this occurs. Without clear communication of a mitigation to the pilot community, it is effectively non-existent and ineffective.

Floor altitude must be raised to accommodate VFR aircraft

In the airspace areas proposed to have a 500 foot AGL floor, Pike Low, Steelhead, Grayling West, and Grayling Low MOAs, there are numerous obstructions, including wind farms, and congested areas that make it impractical for a VFR aircraft to safely or legally fly below 500 feet AGL. VFR aircraft will be forced to fly into a MOA as there will be no other means to egress or ingress underlying airports. It increases the risk for all involved and is disruptive for aircraft operators. VFR pilots would have no choice but to occupy this airspace during military training activities, which can include fast and unpredictable maneuvering.

In our discussions with local operators, all agreed a 500 foot AGL floor would not be acceptable based on safety concerns. Recent safety reports highlight why these concerns are justified. According to the FAA's 2018 *Administrator's Fact Book*, there was a 22% increase in near mid-air collisions between 2016 and 2017. In FY 2017, the FAA selected "close encounters between IFR and VFR aircraft" as an agency top 5 priority as the data indicated an increasing safety concern. AOPA participated as a panelist in this effort in which we reviewed numerous case studies, including several military aircraft conflicts related to spillage out of SUA and due to close proximity maneuvering near civil aircraft. There have also been recent safety reports filed related to near mid-air collisions between General Aviation aircraft and military aircraft in an active MOA.

As numerous VFR General Aviation aircraft operate in this low-altitude airspace routinely, particularly Pike Low and Steelhead, we contend the lowest the floor altitude could be is 3,000 feet MSL. This floor altitude would allow VFR aircraft maneuvering space to transit to and from airports without entering active SUA.

Conclusion

AOPA recognizes and fully supports the ANG's need to train as they fight. We appreciate being engaged early in the process and your willingness to enter into a dialogue about this new airspace. As we have noted, we expect significant impacts from several aspects of the proposed SUA, but we offer our ideas for mitigations and alternatives that we believe would still allow the ANG to conduct their mission successfully and would alleviate our concerns. We look forward to future discussions and, should the proponent move forward with the proposal, submitting formal comments on the environmental and aeronautical impacts of the SUA as viewed by our many thousands of Michigan and Great Lakes General Aviation members.

Thank you for reviewing our comment on this important issue. Please feel free to contact me at 202-509-9515 if you have any questions.

Sincerely,



Rune Duke
Senior Director, Airspace and Air Traffic