January 26, 2016

Alaska Congressional Delegation

Dear Honorable Senator Lisa Murkowski,

The Unmanned Aircraft Systems Legislative Task Force was formed under legislative resolve in 2012. The Task Force is made up of government agency representatives, industry representatives and public members and is working to advance this technology to attract economic opportunities and more importantly to protect Alaskans’ safety and personal privacy through public awareness in the use of small unmanned aircraft systems (UAS) by government agencies and hobbyists.

As a task force, we respectfully submit the following remarks for consideration when reauthorizing the Federal Aviation Administration 2016.

**Education using model aircraft and UAS in public school**

(1)    Change FAA interpretation of the definition of “governmental function” in 49 USC49 USC 40125 to include education:

(2)    Change the definition of “recreation” in the FAA’s interpretation of model aircraft to include the teaching of recreational model aircraft flying for compensation.

The list of public aircraft activities in paragraph (2) has been interpreted by the FAA as an “exclusive list,” even though the language includes the words “such as” meaning the list is to be used as an “illustrative list.”  The FAA’s interpretation excludes education because it is not specifically listed*.  “…if Congress meant education to be included, Congress would have done so, rather like it included law enforcement, search and rescue, firefighting and natural resource management.”*  Excluding education from the list of public aircraft activities makes it illegal for public school teachers to instruct students to fly model aircraft or UAS because any flight operation that is not a public aircraft operation is a civil aircraft operation.  The FAA interpretation goes farther and states any civil aircraft operation for which the pilot is compensated is commercial.  Since teachers are being compensated while they are teaching students to fly model aircraft or UAS, flying of model aircraft in public school is illegal without specific FAA authorization.

Other public school property, like sports and band equipment, is used in the teaching of students.  The FAA’s current interpretations makes teaching model aircraft and UAS technology illegal simply because the article of public school property is an aircraft, and the function “education” is not specifically listed in the list of “such as” activities in paragraph (2) making the flying activity a civil aircraft activity, and the teacher is being compensated making the teaching activity non-recreational, and therefore requiring FAA authorization for commercial aviation operations.

The combination of FAA interpretation thwarts STEM education in our public schools, and does not seem to be the intent of congress.

*49 USC, 40125, paragraph (2) Governmental function.—*

The term “governmental function” means an activity undertaken by a government, such as national defense, intelligence missions, firefighting, search and rescue, law enforcement (including transport of prisoners, detainees, and illegal aliens), aeronautical research, or biological or geological resource management.

*FAA interpretation of “Governmental function.”* [https://www.faa.gov/about/office\_org/headquarters\_offices/agc/pol\_adjudication/agc200/interpretations/data/interps/2014/williams-afs-80%20education%20-%20(2014)%20legal%20interpretation.pdf](https://www.faa.gov/about/office_org/headquarters_offices/agc/pol_adjudication/agc200/interpretations/data/interps/2014/williams-afs-80%20education%20-%20%282014%29%20legal%20interpretation.pdf)

*FAA legal interpretation of model aircraft (see table on page 11).* <https://www.faa.gov/uas/media/model_aircraft_spec_rule.pdf>.

**Beyond Line of Sight operations in Alaska for the purpose of infrastructure inspection and protection.**

Unlike most other areas of the United States, inspection and detection of damage, or pending damage of the oil pipeline, rail system, and high tension electrical grid is complicated by remoteness, challenging weather, and lack of supporting road system.  Inspector’s lives are put at risk unnecessarily considering the UAS technology available today.

Propose a Special Federal Aviation Regulation (SFAR) for the Alaska Pipeline to make the airspace within 500 feet of the pipeline useable on for the inspection and protection of the pipeline, so that it can only be used for aircraft operations authorized to use that airspace.

1.         This airspace will be available to, but not limited to UAS BLOS operations.  Access to the airspace will be controlled by FAA Air Traffic Control as it would control any other controlled airspace serving aircraft on instrument flight plans.

 *2.* For that airspace: Remove the words “to see and” for the regulation 14 CFR 91.113*:  (b)* **General.** *When weather conditions permit, regardless of whether an operation is conducted under instrument flight rules or visual flight rules, vigilance shall be maintained by each person operating an aircraft so as to see and avoid other aircraft. When a rule of this section gives another aircraft the right-of-way, the pilot shall give way to that aircraft and may not pass over, under, or ahead of it unless well clear.*  The FAA’s interpretation of this regulation is: a human eyeball must “see” another aircraft.  That interpretation is hampering the development of beyond line of sight UAS flight.  Removing the words “to see and” does not weaken the requirement of the regulation to maintain vigilance so as to avoid other aircraft.  The words “to see and” are being used by the FAA to limit beyond line of sight operations.

*3.* The SFAR would be used to prove the BLOS concept much as SFAR 97 was used to develop GPS airways.  When the concept was proved to work safely in Alaska, the individual regulations in 14 CFR, part 91 were changes, and the concept of GPS airways was exported to the rest of the US National Airspace System (NAS).

In Alaska there is need for beyond line of sight operations, and a good place for those operations to occur safely.  There is justification for the project in Presidential Directive 7.

<https://www.google.com/#q=Homeland+Security+Presidential+Directive+7+(HSPD-7)%2C>

<https://www.dhs.gov/xlibrary/assets/NIPP_Plan_noApps.pdf>

“6.3.6 Technology Pilot Programs

DHS identifies CI/KR protection needs common to certain types of assets or geographical areas while conducting site assistance, buffer zone protection visits, and other vulner­ability and risk assessments. In some situations, a techno­logical solution may be the best approach to addressing such needs. If a development program is required to create or test a potential technological solution, the DHS S&T Directorate works closely with relevant security partners to implement a technology pilot program. In some cases, this involves working with the DHS Office of Grants and Training (G&T) to identify funds and specialized train­ing. If the pilot program is successful, the technological solutions are then implemented in other locations where similar needs exist. The following technology pilot pro­grams illustrate some of the important capabilities that these programs can offer to security partners:”

 **Determine a definition of “Navigable Airspace relative to 14 CFR 91.119, and the authority of the FAA to regulate airspace that by regulation is not to be used by aircraft, and determine if that airspace shall be used to protect a person’s right to privacy.**

<https://www.law.cornell.edu/uscode/text/49/40102>

(32)“navigable airspace” means airspace above the minimum altitudes of flight prescribed by regulations under this subpart and subpart III of this part, including airspace needed to ensure safety in the takeoff and landing of aircraft.

*49 USC, 40103*

*(b)Use of Airspace.—*

*(1)* The Administrator of the Federal Aviation Administration shall develop plans and policy for the use of the navigable airspace and assign by regulation or order the use of the airspace necessary to ensure the safety of aircraft and the efficient use of airspace. The Administrator may modify or revoke an assignment when required in the public interest.

*§ 91.119 Minimum safe altitudes: General.*

Except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes:  (a) Anywhere.  An altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface.

Thank you for reviewing the remarks from the Unmanned Aircraft Systems Legislative Task Force.

Sincerely,



Representative Shelley Hughes Senator Peter Micciche