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FEDERAL AVIATION
REGULATIONS

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Dear Federal Aviation Administration:

My name is Daniel Fetsch and I am an instrument rated pilot and Aviation Law student enrolled in the flight program at Central Missouri State University. In response to the following NPRM (FAA-2003-14305) which states:

“Under this Special Federal Aviation Regulation, the FAA proposes to allow the use of Global Positioning System/Wide Area Augmentation Systems for the en route portion of flights on routes in Alaska outside the operational service volume of ground based navigation aids. The use of aircraft navigation equipment other than area navigation systems, that only permit navigation to or from ground-based navigation stations, often results in less than optimal routes or instrument procedures and an inefficient use of airspace. This SFAR would optimize routes and instrument procedures and provide for a more efficient use of airspace. Further, it would result in an associated increase in flight safety.”

I would like to show my support and request that it be brought into effect to increase safety for airmen in Alaska. Alaska is obviously a more dangerous state for aviation due to its natural conditions, but it can be made safer through the use of GPS/WAAS technology. Because of hazardous weather and terrain, and because of less reliable radio navigation aids in Alaska, GPS/WAAS en route capabilities will benefit aviation safety in the state of Alaska because of its high precision and reliability.

There is no argument that Alaska is a more dangerous area for pilots than others. Its accident rate proves this. There is a 2.5 higher average accident rate versus other states. This statistic especially applies to controlled flight into terrain (CFIT) accidents as well as mid-air collisions. When one looks at the natural conditions of the Alaskan region it is quite obvious why it has a higher accident rate. The large percentage of

mountains in the area definitely increases the risk and danger of navigation, especially in instrument meteorological conditions. Another reason is that many cities are isolated by these tall mountainous regions and may only be accessed by air, or air is the only practical means of getting in and out. These cities may rely on pilots to fly in vital supplies, or fly people out for medical emergencies, and these routes are usually dangerous in IMC. Another serious problem faced by Alaskan aviators is the relatively colder climate, which many times can cause a lower icing level. For a pilot flying a non-turbine or jet aircraft, it may not be possible in the name of safety to penetrate these icing levels to get on top. Because of this, many pilots of light single and multi engine reciprocating aircraft find themselves restricted to altitudes as low as 2000 feet AGL in dangerous IFR or marginal IFR conditions.

As of now, pilots in Alaska are restricted to flying on federal airways in IFR conditions. Sometimes these routes are un-flyable, or just downright impractical. If a pilot is flying at 2000 ft. to stay out of icing conditions, it is very unlikely that he or she will be able to receive the radio signal required to navigate on an airway. In a mountainous area, this would most likely be impossible. In the case of a medical emergency, a pilot may have to fly a highly impractical, non-direct route, possibly adding a couple of hours to the flight time. Radio Navigation Aides are incredibly low-precision navigational tools when compared to GPS/WAAS technology. A pilot flying on a VOR airway could be as much as a few miles off course with even a small deflection on the course deviation indicator (CDI) if he or she was a long way out. This just does not seem very safe in highly mountainous area.

Up until recently, it is very understandable why GPS was not authorized for en route IFR navigation in Alaska. First of all, even though it was more precise than radio navigation aides, it was still not as precise as it is now. Also, there were certain errors associated with GPS that were a concern to the FAA such as satellite drift and speed error as well as clock errors. There was also the possibility that ionic disturbances in the upper atmosphere could reduce the integrity of the satellite signal. The most basic reason why it was not allowed was that the satellite signal could be blocked by natural obstructions (mountains). But now the Wide Area Augmentation System or WAAS has corrected every one of these possible GPS faults. With the installation of ground stations that enhance, ensure, and correct satellite errors, GPS has become very precise and effective. Signals are guaranteed in areas they once were not. Precision has been increased to an error of less than 3 meters. And the ground stations can now correct for satellite drift, speed, and clock errors. Also important, GPS/WAAS will increase efficiency of aviation by allowing pilots to create their own routes, allowing pilots to more often fly direct routes, and increase safety by reducing congestion on federal airways.

It just seems to make sense to now allow GPS/WAAS to be used en route in IFR conditions in Alaska. Times have changed, and with WAAS capabilities, GPS is now far more accurate and reliable than any other type of navigational aide on Earth. Changing the current rule will increase safety for aviators in Alaska. Any pilot will agree, and so do the Alaskan Airmen's Association and the AOPA, who have both supported this regulation change for quite some time now. It is time to utilize this great new technology

to increase efficiency of aviation as well as the safety of pilots not only in Alaska, but the world around.

Thank you,

Daniel Fetsch