TESTIMONY
OF PAUL SNYDER, DIRECTOR OF UAS
OPERATIONS FOR THE JOHN D. ODEGARD
SCHOOL OF AEROSPACE SCIENCES
LEAD – AUTONOMOUS PLATFORMS, RESEARCH
INSTITUTE FOR AUTONOMOUS SYSTEMS

January 23, 2025

HOUSE BILL 1429

Dear House Agriculture Committee,

I am Paul Snyder, Director of the UAS Operations Program at the University of North Dakota John D. Odegard College of Aerospace Sciences and Lead for Autonomous Platforms at UND's Research Institute for Autonomous Systems (RIAS). I have had the privilege to be a part of the aviation community in North Dakota for over 30 years – crewed and uncrewed.

Today I write to give testimony in **opposition** of House Bill NO. 1429,

The expansion of aviation into the lives of North Dakotans has been a great economic equalizer. Those who live in rural communities are now able to use low-cost technology to accomplish tasks that once could only be accomplished by traditional crewed aircraft, such as a helicopter. Small UAS are able to transverse large distances, at low cost, to check crops and cattle, to inspect power lines and wind turbines, monitor oil leaks, conduct emergency response, deliver medicine, inspect oil leaks, monitor areas for fires, train workforce at high school and higher education institutions, conduct advanced research. Education and research that is improving lives of North Dakotans as well as advancing national security. The possibilities are endless. Again, at a cost that is reasonable, much of rural ND can expect to see their quality of life improved because of UAS aircraft.

Not only can the technology be used for these purposes, but small UASs can be used to spot spray fields, using less chemical with improved accuracy. UAS have been used to collect data from ground sensors to research micro weather and other data collection sets such as bee movement over fields to identify where to place bee hives to increase pollination and therefore increase crop yield. These are viable research efforts conducted by educational institutions to help ND farmers. Students, the future workforce, have assisted in this research as part of their education.

UND Aerospace also operates UASs to train the future aviation workforce. We are a public institution, which trains operators how to safely, ethically, and efficiently manage and operate UAS. This bill does not address educational and research institutions as a reasonable purpose for operating UAS.

Consider the crop duster. The operator must reach the area they plan to spray. Does a crop duster have to ask for permission for non-commercial flights between two locations? When the crop duster sprays, the aircraft turns around passing over unaffected farmland, would these farmers also have to give written approval if it was a UAS, but not if it was a crewed crop duster?

Benefits of UAS continue to grow, but to take almost any example listed above and apply HB 1429 has the potential to significantly hinder the commercialization, research, and education of UAS and will reduce the likelihood for ND residents to start enjoying the benefits that UASs can be for energy, agriculture and so many other industries.

The legal right for a UAS aircraft to fly in navigable airspace is under the jurisdiction of the Federal Aviation Administration, not the State.

Furthermore, this law does nothing to protect an individual from being photographed by preventing flight over an owner's land. Technology has gone beyond this. Even commercial off-the-shelf (COTS) cameras have the ability to see long distances. If an individual had nefarious motive they could as easily conduct surveillance from an adjacent location, just indicate they were flying over 400ft, or possibly take a picture from the road.

Furthermore, most UASs use the camera to safely navigate or at a minimum the camera is used as a backup in case primary navigation is lost; therefore, almost every drone is equipped with a "surveillance device." Often, to fly without a camera would decrease safety of flight and likely prevent the general public from ever flying.

Federal Aviation Regulations Part 108 Beyond Visual Line of Sight regulations is being released this year which will provide further guidance to allow UAS aircraft to fly for miles beyond their departure point, not just visual line of sight from the pilot. This would cause undue burden on the public to get permission for every quarter of land they pass over.

While much detail could be written, I implore that you examine existing federal as well as state laws and recognize the negative impact this particular bill will have on North Dakota's leadership and reputation in UAS operations. This bill will hinder us as a state to advance in UAS education, workforce development, and research; impacting farmers as well as national security.

As a leader in UAS education, research, and training, if UND Aerospace can ever assist you or answer any questions regarding UAS, Counter-UAS, or autonomous operations, please do not hesitate to contact me.

Sincerely

Paul Snyder
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John D. Odegard School of Aerospace Sciences – UND Aerospace
Lead - Autonomous Platforms
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