

Testimony, in favor of HB 1519, from Thomas Swoyer, Jr., President and Partner, Grand Sky Development Company, LLC.

On behalf of Grand Sky Development Company, LLC in Grand Forks, I submit this testimony in support of House Bill 1519. House Bill 1519 represents a strong step forward in the continued growth and development of the Uncrewed Aerial Systems (UAS) industry in North Dakota. The State of North Dakota has invested in a leadership position in the UAS industry, and these investments are generating tangible and intangible returns in the form of tax revenue, jobs, opportunities for North Dakota residents, national defense, and notoriety for the State as a great place to do business. State investments to date have also created new academic opportunities in support of FAA, NASA, NOAA, and national defense research. State investments are helping industry to use UAS more broadly and to explore and incorporate ground and aerial systems. State investments have created the Northern Plains UAS Test Site which provides the regulatory interface that gives North Dakota UAS firms a distinct advantage when competing in other parts of the country. State investment has propelled the growth of GrandSKY, the nation's first and largest UAS focused business park. State investments have helped attract some of our country's largest defense contractors who are growing and flourishing in North Dakota because of the environment that has been created. There is still more opportunity ahead. I offer my support for House Bill 1519 because North Dakota can still seize new opportunities. Investing in the grant program envisioned in HB1519 would help start opening opportunities for specific state agencies to tap into the incredible value UAS. HB1519 would offer funds that allow state agencies to leverage the previous investments that have been made.

HB1519 will offer state agencies the chance to utilize UAS for various work processes. UAS can help with workforce augmentation allowing one person to accomplish more in a day's work. UAS can allow for data collection that otherwise would be difficult to acquire. UAS allows people to perform dull, dirty, and dangerous work safely and efficiently. The grant program envisioned within HB1519 provides the seed funding that will allow the included agencies to determine how UAS can be used for their specific needs. HB1519 creates a powerful incentive to get state agencies to engage UAS for their needs however, some changes could benefit the program as it is developed.

When we discuss UAS, we often point to the aerial vehicle, the drone itself, as the tool that makes the difference. However, the "S" in UAS represents the "system" and it's the system that makes UAS so valuable. The drone by itself is not very useful. The drone needs to carry a camera or some other sensor that can collect information. Taking an additional step, the raw data collected by the camera on the drone requires processing and interpretation to capitalize on the "system's" total capability and usefulness. Without the payload elements like cameras or other sensors and software to process the collected data, a UAS is just a drone.

It should be the goal of the legislature to approve these funds to create the proposed grant program to help create the best incentive possible for local government entities to partner with state agencies to use UAS. To support such a program and to have it be as robust as possible, I offer the following recommendations:

1. Any funds authorized and appropriated under HB1519 should NOT be allowed to be used for the purchase of any uncrewed aircraft system,

autonomous vehicle, or other autonomous technology. The risk of allowing entities to purchase systems is that those systems will end of sitting on a shelf in the future, unused. The technology of the aircraft, the sensors, and the processing software change rapidly. Rules for the use of UAS or autonomous technology are still being written and can change. The goal of HB1519 should be to take advantage of using UAS systems, to acquire data, turn it into information and make decisions with it. The goal should NOT be to own the system.

2. Owning UAS, autonomous vehicles or other autonomous systems creates the challenge for each agency or local government to hire the people necessary to legally fly the aircraft, manage the and maintain the systems, process the data acquired. There are various subsets of problems with this approach:
 - a. The aircraft will need to be managed as state owned aircraft under state aviation rules and requirements.
 - b. Use of the aircraft will require insurance for their use.
 - c. State employees flying the aircraft or managing the use of the vehicles will need to acquire and maintain the proper registrations and licenses.
 - d. Data management will become a significant effort. If data is acquired with state owned UAS, is that data automatically and inherently government data and available to the public?
 - e. How will the state manage the inadvertent collection of personally identifiable information (PII) which is regulated under the 4th Amendment of the US Constitution? If PII is inadvertently collected

but the data is owned by the state and publicly available, the state finds itself in potential jeopardy.

3. The draft legislation also refers to *“the inspection, operating, maintaining, or constructing critical infrastructure.”* The inclusion of the word “critical” creates risk for the end users the bill wishes to incentivize. There are regulatory connotations to defining “critical” infrastructure. I recommend that the word critical be removed and that UAS can be used for *“inspection, operating, maintaining, or constructing infrastructure.”*
4. Certain exceptions may need to be made for the use of UAS, Autonomous Vehicles and other Autonomous Systems in support of law enforcement, emergency management or medically regulated transportation. In these cases, collection of data may need to be protected and the systems may need to be owned by the entity using them. I am not an expert in this area, but such exceptions may be necessary.
5. HB1519 should seek to cause state agencies to HIRE North Dakota companies that can provide the services needed and use the grant funds to pay for those services. This approach alleviates nearly all the concerns raised in this document by placing the burden of managing the aircraft, pilots, maintenance, software, cameras, and other sensors and producing the final product on a private business that has been established in the state for this purpose. It reduces the burden on state agencies to hire people to be trained and certified in the use of UAS of Autonomous Systems.
6. Ultimately, the UAS industry and state agencies will benefit from larger grants. In the short term, the grants will offer the best incentive to hire

UAS operators and for agencies to learn how best to take advantage of their incredible capabilities. Rules for how data collected with these grants can be accessed by the public may need to be created. Investment into how to properly manage, store and make data available will be important for the continued growth in UAS and Autonomous Systems use. It would be tragic to make investments in UAS or Autonomous System use only to create a “data deluge” that requires investment in its management to become useful.

As one member of the North Dakota UAS ecosystem, I endorse and recommend passage of HB1519. I believe that despite the work required to effectively manage the grant program and to manage the resulting work / data that will be created using these systems, the potential upside is too great. HB1519 is an excellent step forward for the continued growth of the North Dakota UAS industry.