



## **Executive Summary**

**REPORT TO THE OREGON LEGISLATURE**

***UNMANNED AERIAL SYSTEMS***

***“Drones”***

- (1) The status of federal regulations relating to unmanned aerial vehicles; and**
- (2) Whether unmanned aerial vehicles operated by private parties should be registered in Oregon in a manner similar to that required for other aircraft.**

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## Executive Summary

As required by House Bill 2710 Oregon Laws 2013, the Oregon Department of Aviation respectfully submits a report to the Legislature on the status of Unmanned Aerial Systems (drones) as noted below;

**SECTION 18. On or before November 1, 2014, the Oregon Department of Aviation shall report to a joint interim committee of the Legislative Assembly related to the judiciary, or other appropriate interim committees, on:**

- (1) The status of federal regulations relating to unmanned aerial vehicles; and**
- (2) Whether unmanned aerial vehicles operated by private parties should be registered in Oregon in a manner similar to that required for other aircraft.**

HB 2710 provides protection from violations of privacy and due process and regulates how Oregon law enforcement could use unmanned aircraft. It provides both civil and criminal penalties for violations of the law involving unmanned aerial systems, also known as drones.<sup>1</sup>

The statute also protects legal drone operators from interference by making interference such as shooting or firing any projectiles or directing a laser at it a Class C felony as well as subject to civil remedy. The law also protects private landowners from overflight below 400 feet punishable by civil penalty with up to treble damages and attorney fees. The statute includes a state preemption clause directing that the authority to regulate ownership or operation “*is vested solely in the Legislative Assembly*” and “*no local government unless authorized by statute, can regulate drone ownership or operations*”.<sup>2</sup>

The legislation also required the Oregon Department of Aviation (ODOA) to begin registering public UAS by January of 2016.

### Status of Federal Regulation

The FAA Modernization and Reform Act (FMRA) of 2012 has had far reaching and significant effect on the unmanned aircraft industry as well as both federal and state governments. The provisions of that legislation provide direction for every stakeholder in terms of timelines, direction and progress of UAS development. Congress directed the FAA to “*develop a comprehensive plan to safely accelerate the integration of civil unmanned aircraft systems into the national airspace system as soon as practical but not later than September 30, 2015.*”<sup>3</sup> By the FAA’s own admission and a U.S. Department of Transportation Inspector General (IG) report, the FAA will not make that deadline. According to the IG report published in June 2014, FAA is not “*effectively managing its oversight of UAS operations*”<sup>4</sup>

The FMRA also directed the FAA to develop rules for integration of small UAS into the NAS by no later than August 2014. The FAA has still not published a Notice of Proposed Rulemaking (NPRM) as of November 2014. They have also indicated it will take 16 months after the NPRM is published before they will implement the rule.

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<sup>1</sup> The news media and popular culture have referred to Unmanned Aerial Systems as “drones” and for practical reasons, the term will be used interchangeably with the term Unmanned Aerial System (UAS) and in some cases Unmanned Aircraft (UA). UAS includes the aircraft, communication system and ground based operator and other equipment used to fly a UA. Unmanned Aircraft is only the aircraft itself.

<sup>2</sup> HB 2710 Engrossed, 77th OREGON LEGISLATIVE ASSEMBLY--2013 Regular Session

<sup>3</sup> FMRA of 2012 section 332 Integration of Civil Unmanned aircraft Systems into National Airspace System para (3)

<sup>4</sup> U.S. Department of Transportation Office of Inspector General Report dated June 26, 2014, *FAA Faces Significant Barriers To Safely Integrate Unmanned Aircraft Systems Into the National Airspace System.*

Congress tasked the FAA to establish 6 test sites to provide data to help with the integration of UAS into the National Airspace System. The 6 test sites selected are: (1) Alaska (teamed with Oregon and Hawaii), (2) Nevada, (3) New York, Griffiss International Airport, (4) North Dakota Dept. of Commerce, (5) Texas A&M Corpus Christi, TX, and (6) Virginia Tech University, Va. The Oregon test sites were coordinated by a consortium (named SOAR) that established three UAS test sites to bring economic development to Oregon:

1. Tillamook Airport on the northwest coast of Oregon
2. Warm Springs in Central Oregon.
3. Pendleton Airport in Northeast Oregon

In addition to the process of developing and enforcing UAS regulation, the FAA has also become involved in litigation with drone operators. In *Pirker v Huerta*, the FAA fined a drone operator \$10,000 for what they considered careless and reckless operation of a drone.<sup>5</sup> The case was overturned on appeal and the FAA renewed enforcement efforts through new rulemaking in 2014. Additional legal action took place in a similar case with Texas Equusearch, a nonprofit company that used drones to conduct search and rescue efforts in Texas and other states. The Academy for Model Aeronautics has also filed suit with the FAA to prevent what they consider overreach in regulating recreational drones through their 2014 rulemaking.

FAA's enforcement action is relevant to concerns about safety of airspace and an increase in reports of near misses between drones and manned aircraft. Of note, almost all of the increase in near misses is by recreational/model drone operators due to their popularity. The operators are generally not familiar with FAA airspace. As a result, the FAA is planning to crack down on safety violations by irresponsible operators. The Academy for Model Aeronautics, an organization that promotes unmanned model aircraft is planning a campaign to educate new model aircraft operators on best practices and prohibited types of operations.

From an economic perspective, many businesses see UAS as a cost effective and safe alternative to manned flight. Agriculture, oil and gas industry, news and sports reporting and real estate companies are a few of the industries interested in using UAS. According to a report by the AUVSI, the unmanned aerial systems industry will be a \$13.6 billion dollar business nationally in the next three years, and providing over \$82 billion and 100,000 new jobs into the economy of in the United States by 2025.<sup>6</sup> In AUVSI's state by state comparison, Oregon will also benefit from the economic impact. AUVSI forecasts Oregon to employ over 600 people in the state by 2025 with an economic impact of over \$60 million dollars.<sup>7</sup> There are already over 200 companies in Oregon that are involved in the UAs industry. The legislative report lists them in Appendix C

Oregon is viewed by industry and civil liberties groups as having effectively regulated UAS to protect privacy and ensure that law enforcement agencies are required to protect citizens' due process rights. It is also one of only two states that requires registration or licensing of Unmanned Aircraft. North Carolina is the other state and requires "licensing" of UAS. The main report has a chart with legislative actions on UAS for all 50 states in Appendix D.

### **Recommendation on Unmanned Aerial Vehicles Operated by Private Parties**

For unmanned aircraft, the Oregon Department of Aviation looked at three options to recommend to policy makers and the Oregon Legislature to include:

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<sup>5</sup> *Huerta v. Pirker*, Docket CP-217, National Transportation Safety Board office of Administrative Law Judges dated march 6, 2014

<sup>6</sup> Association of Unmanned Vehicle Systems International Report dated March 2013; **The Economic Impact Of Unmanned Aircraft Systems Integration In The United States**; [http://higherlogicdownload.s3.amazonaws.com/AUVSI/958c920a-7f9b-4ad2-9807-f9a4e95d1ef1/UploadedImages/New\\_Economic%20Report%202013%20Full.pdf](http://higherlogicdownload.s3.amazonaws.com/AUVSI/958c920a-7f9b-4ad2-9807-f9a4e95d1ef1/UploadedImages/New_Economic%20Report%202013%20Full.pdf)

<sup>7</sup> *Ibid*, AUVSI report dated March 2013 state by state page 33, [http://higherlogicdownload.s3.amazonaws.com/AUVSI/958c920a-7f9b-4ad2-9807-f9a4e95d1ef1/UploadedImages/New\\_Economic%20Report%202013%20Full.pdf](http://higherlogicdownload.s3.amazonaws.com/AUVSI/958c920a-7f9b-4ad2-9807-f9a4e95d1ef1/UploadedImages/New_Economic%20Report%202013%20Full.pdf)

1. Register all private use drones (including commercial and recreational) but postpone registration until federal law and litigation become more stable in the next year or two. This option gives the state the flexibility to delay registration until federal regulation, technology and industry trends the opportunity to develop Accountability for safety, privacy, due process and nuisance are adequately addressed by existing laws including HB 2710.
2. Register only commercial UAS. This option covers the most responsible operators constrained by federal law and insurance coverage requirements. It will provide the state of Oregon with realistic numbers of commercial UA operating in Oregon. FAA intends to assign registration numbers (N-numbers) to all commercial UAS. State registration would register UAS using N-Numbers and FAA classification of UAS by size.
3. Register both Commercial and Recreational UAS. This could be done by assigning a serial number for both recreational and commercial UAS similar to FAA assigned N-numbers and making it a statutory requirement to register using the AMA and AUVSI to help educate the model aircraft and Commercial users.

### **Recommendation**

The Oregon Department of Aviation recommends **Option One** for the following reasons;

- Registration is important to help identify UAS users for accountability of the operators. However, over the next two years, there will be few commercial operators until FAA allows their legal use in the National Airspace.
- The FAA has not submitted their small UAS NPRM yet and will not develop final regulation of small UAS until at least 16 months after the NPRM is posted for comment in the Federal Register. Registration and revenue estimates would most likely not meet collection requirements to justify FTE.
- Delay will allow UAS market demand to develop, clarify federal regulation and allow current litigation regarding rules for recreational and commercial UAS to establish precedent for court adjudication.
- For recreational users, this would provide an opportunity to evaluate the effect of current law and determine if registration and additional regulation of the model aircraft users is needed.
- Only one other state, North Carolina, requires registration. Until the market is more established in individual states, assessing fees for commercial use unmanned aircraft could factor into a company's decision on which state to locate their business. The line between commercial and public use will be blurred by public agencies contracting with commercial operators.
- Public use operators will be determined in the same manner as manned aircraft. They will be required to be in compliance with federal regulation under 49 U.S. Code 401258 on what constitutes public use vs commercial unmanned aircraft.

For publicly owned UAS currently required to be registered by January 2016, the number of aircraft will be fairly small over the next two years with the FAA taking a go slow approach to public use. It is feasible for Oregon Department of Aviation to register these small numbers within existing resources.

### **Additional Recommendation**

Although not required by HB 2710, the Oregon Department of Aviation also recommends establishment of a working group or task force to track federal law, provide input for future legislative action and track industry developments. Such a working group could be patterned after Alaska's Legislative task force or be implemented on a more informal basis with stakeholders from law enforcement, civil liberties groups, commercial, public use and recreational stakeholders, as well as state and local government representatives.

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<sup>8</sup> 49 U.S. Code 40125, <http://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title49-section40125&num=0&edition=prelim>