

Oregon Department of Aviation (ODA)



***“SUPPORTING OUR
COMMUNITIES BY
PRESERVING AND
ENHANCING AVIATION”***



Mission

- ODA serves the state of Oregon through a three-fold focus of advocating for the safe operation, economic growth, infrastructure improvement of aviation and airports in Oregon.
- Committed to the development and realization of its strategic plan by:
- Providing Service to **aviation constituents, airport owners/sponsors** and **aviation system users** throughout Oregon;
 - Addressing statewide aviation issues;
 - Coordinating and providing expertise on aviation legislation
 - Maintaining 28 State-owned Airports

- ➔ **97 Public Use GA Airports in Oregon**
 - **28 are State Sponsored**
 - **Located in all regions of the state**
 - **7 Air Carrier Airports (FAR 139)**

- ➔ **370+ Private Use Airports**

McKenzie Bridge State Airport at west foothills of Cascade Mountains.



Joseph State Airport located east of Wallowa Mountains.

- ➔ **4000+ Aircraft actively registered**
- ➔ **4,500 Active pilots**

Unmanned Aerial Systems (UAS) aka “drones”

Drone



UAS/UA







ONLY ON 7NEWS



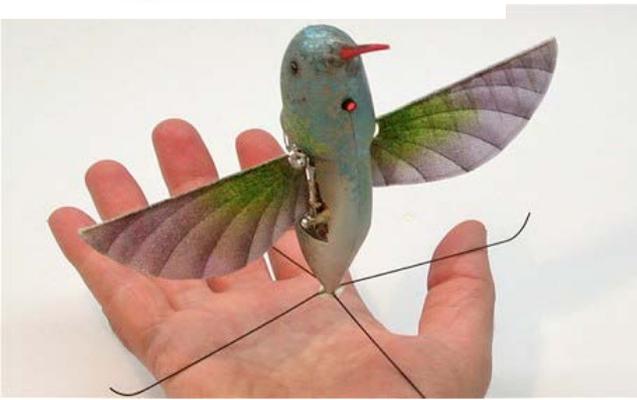
SMALL TOWN CONSIDERING BOUNTY ON DRONES
DEER TRAIL WOULD SELL DRONE HUNTING LICENSES







THE ALL-NEW TRIMBLE UX5 [Learn more >](#)
Take mapping to a new level and beyond



UAS 101

- Classes of drones
 - Public use – register by January 2016
 - Private Use/Commercial
 - Private Use/Recreational

- Three federally designated weight classes
 - Over 55 pounds – Heavy
 - Under 55 pounds – Small UAS light (FAA Part 107, Ch 14 CFR)
 - Micro UAS -
 - No final rule yet- ARC (Aviation rulemaking committee) met in March 2016
 - Risk based goal to allow flight over people)
 - Potentially 4 risk based categories

- What are the main issues related to Drones?
 - Privacy
 - Law Enforcement Concerns (Due Process/Warrants)
 - Safety (separation from manned aircraft/people on the ground)





UAS Public Use Potential

- <http://www.youtube.com/watch?v=3zE6BaFDkP4> Juggling
- <https://www.youtube.com/watch?v=D4VI2FHd14I> agriculture
- Law enforcement
 - Traffic scene management
 - On Scene situational awareness
- Forestry –
 - Fire detection/monitoring
 - Tree Disease vector location
 - Invasive species location
- Fish and Wildlife
 - Wildlife tracking and monitoring
 - Invasive Species identification
 - In Africa – Used to identify and prevent poaching
 - <http://www.bbc.com/news/business-28132521>
- Emergency Management –
 - Search and Rescue
 - Tsunami/Earthquake damage assessment identification and documentation
 - Highway/bridge assessments - LIDAR



Airspace for UAS?

- FAA AC 91-57A - no flights above 400 ft AGL for unmanned model aircraft
- Oregon HB-2710 – no flights below 400 ft AGL over private property
- NASA - Project to help FAA integrate UAS into the NAS
 - Developing UAS airspace below 500 ft.
- What are the limits? –
 - How to find the balance?
 - Altitude based or Operator intent?
- FAA Part 107 – Small UAS rules
- FAA has allowed integration into unregulated airspace in the Arctic



Federal Regulation

- **FAA Modernization and Reform Act of 2012**
 - Directed FAA to allow UAS entry into National Airspace by September 2015
 - FAA has exceptions but has not put out small UAS policy (part 107)
 - DOT IG report says FAA is “not effectively managing its oversight of UAS operations”
 - Directed 6 test sites around country
 - 6 test sites include:
 - **University of Alaska, (teamed with Oregon and Hawaii/-diversity of test ranges)**
 - State of Nevada (air traffic control/intro to National Airspace System (NAS))
 - New York, Griffiss International Airport (sense and avoid/process)
 - North Dakota Department of Commerce (airworthiness and link technology)
 - Texas A&M University Corpus Christi (system safety requirements)
 - Virginia Tech University (UAS failure mode testing/risk, test sites in VA, NJ)
- **FAA Privacy policy (Sep 2013) -mission is aviation Safety, no legal authority to regulate Privacy**
 - Directs 6 test sites to have privacy policies available for public review
 - Directs other Federal Agencies to keep records and have privacy policy



Oregon Test Sites

- Tillamook Range:
 - Access to coastal maritime, mountains and
 - Long term tenant – NearSpace Corp. - balloons and UAS
 - Interaction with general aviation (GA) community
- Warm Springs Range:
 - High Plains and mountainous region
 - Potential to demonstrate forest fire fighting
- Pendleton Airport Range –
 - Eastern Geographic region
 - Infrastructure in place
 - Long term interaction with GA community and Mil UAS



FAA Reauthorization Section 333

- Section 333 of FMRA – Exemptions to Policy that has not been promulgated
- FAA Notice of Proposed Rule Making (NPRM)
 - Small UAS draft rule issued on Sunday, Feb 15, 2015
 - No Permanent rule for 18 months!?
- ~~6,283,000~~, 4,888+ exemptions granted to multiple industries since Jan 2015,
 - Movie Industry
 - Agriculture
 - Oil/Power Line Inspection
 - Fire fighting
 - Anybody who can fill out the application



Public Use UAS

- Must comply with Public Aircraft statute
 - [Title 49 U.S.C. § 40102\(a\)\(41\)](#)
 - http://www.faa.gov/regulations_policies/advisory_circulars/index.cfm/go/document.information/documentID/1023366
- Requires a Certificate of Authorization or waiver (COA)
 - <https://ioeaaa.faa.gov/oeaaa/>
 - FAA advertises a reply within 60 business days
- Also requires registration and marking of UAS
- Cannot be for profit or commercial purposes
- Universities subject to Public aircraft law
 - Research must be “about” the UAS
 - Can’t be using the UAS as a platform for other unrelated research



Recent FAA UAS Changes

- UAS Recreational registration required (effective Dec 21st , 2015)
 - Christmas rush after publicity over high consumer demand/purchases
 - First use of ARC for UAS – Good top cover for FAA
 - Enhanced ID and safety culture
 - .55 to 55 lbs
 - Online registration with low cost - \$5.00
 - <http://www.faa.gov/uas/registration/>
 - Over 300,000 registrations

- Small UAS Registration expands comm and public use/COA required – (March 2016)
 - Recreational - FAA 91-57A plus registration
 - Commercial – Section 333 Exemption plus registration
 - Public Use - COA plus compliance with Public aircraft law plus registration

- Changes to Blanket COA altitude authorization (March 2016)
 - 400 ft except major cities, restricted airspace
 - For 333 Exceptions and government operations
 - Less than 55 pounds

- Micro UAS Draft rulemaking (April 2016)
 - 4 Categories based on Abbreviated Injury Scale (AIS)
 - AIS Level 3 classified as “serious” - small penetrating skull, sinus thrombosis, ischemic brain damage, basilar fracture.



Federal Preemption Issue

https://www.faa.gov/uas/regulations_policies/media/UAS_Fact_Sheet_Final.pdf

- Federal Preemption – Congress has directed the FAA to “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.” 49 U.S.C. § 40103(b)(1).
- Substantial air safety issues are raised when state or local governments attempt to regulate the operation or flight of aircraft. If one or two municipalities enacted ordinances regulating UAS in the navigable airspace and a significant number of municipalities followed suit, fractionalized control of the navigable airspace could result. In turn, this ‘patchwork quilt’ of differing restrictions could severely limit the flexibility of FAA in controlling the airspace and flight patterns, and ensuring safety and an efficient air traffic flow. A navigable airspace free from inconsistent state and local restrictions is essential to the maintenance of a safe and sound air transportation system. See *Montalvo v. Spirit Airlines*, 508 F.3d 464 (9th Cir. 2007), and *French v. Pan Am Express, Inc.*, Where Congress occupies an entire field . . . even complimentary state regulation is impermissible.
- There is state preemption as well



State Issues

Legislative Report - http://www.oregon.gov/aviation/docs/UAS_Legislative_Report.pdf

- State issues:
 - State UAS stakeholders working group
 - House Bill 2710 regulation of UAS
 - Law enforcement/Due process protections
 - Civil penalties for privacy violation (below 400 ft)
 - Airspace: Federal Preemption?
 - State Preemption; no local laws regulating UAS
 - No weaponization
 - Not applicable to recreational UAS
 - Registration of Public Use drones in Oregon
 - <http://www.oregon.gov/aviation/Pages/index.aspx>
 - 2015 Legislative bill –
 - no hunting or angling with UAS (HB 2534)
 - Gets rid of 400 ft altitude from 2013 Leg Session (HB 2354)



State Issues Con't

- 2016 Legislation (HB 4066)
 - Expands prohibition of weaponization to everyone!
 - Creates Class A violation of reckless interference with aircraft
 - [Changed law for use of UAS collected data](#)
 - Clarifies that operations IAW FAA exempt from civil action ...unless violating privacy
 - Creates [critical infrastructure](#) protection below 400 ft over designated properties

- Cottage Industry growth in Oregon!
 - Private enterprises using recreational/commercial UAS
 - Real estate, agriculture, sporting events, inspections etc.
 - Increasing number of incidents with manned aircraft
 - Accountability challenge: “chasing bees” vice “access to the hives”

- Law Enforcement Resources
 - Many complaints from local communities
 - Local police and Sheriffs filling gap in enforcement from FAA
 - https://www.faa.gov/uas/law_enforcement/



Additional State Laws

- 2016 Changes from HB 4066 ORS 837.300
 - No interference with aircraft using UAS
 - Public body must publish use of UAS on website
 - Must be available to public
 - Policies and procedures
 - Length of time data will be stored
 - Specification for 3rd party storage
 - Policy on disclosure of data through IGAs

- Amends ORS 163.700 (Invasion of privacy) statute to include recording data using a UAS



Oregon UAS Regulations

— ORS 837 Highlights

- Public agencies must register with Dept of Aviation (ORS 837.360)
 - Fee = \$25 annually
 - Failure to register fine = up to \$10,000/evidence inadmissible
 - Must report annually to Aviation on:
 - » Name of the public body
 - » Contact information
 - » Frequency and purpose of use
 - Dept of Aviation must report info annually to Legislature
- Warrant required for law enforcement (ORS 837.310)
- Written consent required from property owner (ORS 837.330)
- Emergency use clause for emergency use (ORS 837.335)
- Civil penalties for overflight of private property (ORS 837.380)
- May be used in criminal investigation/5 day retention (ORS 837.340)
- State preemption – only OR Legislature may regulate (ORS 385.385)
- Careless and reckless subject to penalty (ORS 837.080/998)



Links

https://www.youtube.com/watch?v=hKTK_cVJHko WTNH News 8 shooting drone

<https://www.youtube.com/watch?v=ZIHNM37maK0> sense and avoid

<https://www.youtube.com/watch?v=83Y14qgITCY> NASA Google UTM airspace

<https://www.youtube.com/watch?v=OZnJeuAja-4> Pirker

Questions?



2016 UAS Legislation

HB 4066 - SECTION 7 Policies and procedures for use of data.

(1) A public body that operates an unmanned aircraft system shall establish policies and procedures for the use, storage, accessing, sharing and retention of data, including but not limited to video and audio recordings, resulting from the operation of the unmanned aircraft system.

2) The public body shall post the following information on the public body's website or otherwise make the following information available to the public:

(a) The policies and procedures established under this section.

(b) The text of ORS 192.501.

(3) The policies and procedures established under this section must include:

(a) The length of time data will be retained by the public body.

(b) Specifications for third party storage of data, including handling, security and access to the data by the third party.

(c) A policy on disclosure of data through intergovernmental agreements.



2016 UAS Legislation

HB 4066 - SECTION 13

(1) “critical infrastructure facility”

The following facilities, if completely enclosed by a fence or other physical barrier that is obviously designed to exclude intruders, or if marked with a sign conspicuously posted on the property that indicates that entry is forbidden:

- (a) A petroleum or alumina refinery;**
- (b) An electrical power generating facility, substation, switching station or electrical control center;**
- (c) A chemical, polymer or rubber manufacturing facility;**
- (d) A water intake structure, water treatment facility, wastewater treatment plant or pump station;**
- (e) A natural gas compressor station;**
- (f) A liquid natural gas terminal or storage facility;**
- (g) A telecommunications central switching office;**
- (h) A port, railroad switching yard, trucking terminal or other freight transportation facility;**
- (i) A gas processing plant, including a plant used in the processing, treatment or fractionation of natural gas;**
- (j) A transmission facility used by a federally licensed radio or television station;**
- (k) A steelmaking facility that uses an electric arc furnace to make steel;**
- (L) A dam that is classified as a high hazard by the Water Resources Department;**
- (m) Any portion of an aboveground oil, gas or chemical pipeline that is enclosed by a fence or other physical barrier that is obviously designed to exclude intruders; or**
- (n) A correctional facility or law enforcement facility**

