

Aruna Miller Legislation Support Work

Scope of work: Note From Miller Office

Status: September – Clarifications by Darnell

Status: Meetings/discussions: 9/30/2016 – Reviewed this version with Darnell.

Dr. Ray,

I hope this e-mail finds you well. I am following up our phone call from yesterday about research for drone legislation. Please review Delegate Miller's previous drone legislation that was introduced in 2015 (House Bill 620).

<http://mgaleg.maryland.gov/webmga/frmMain.aspx?pid=billpage&stab=01&id=hb0620&tab=subject3&ys=2015rs>

Delegate Miller would like you to research legislation in other states that have passed drone legislation. Delegate Miller appreciates you willing to offer your time to research this topic.

Thanks for looking into this matter and we look forward to your response.

Sincerely,

Darnell Hart

Legislative Aide, Delegate Aruna Miller

District 15, Montgomery County
6 Bladen Street Room #426
Annapolis, MD 21401

Aruna.Miller@house.state.md.us

P: 301.858.3090 | Fax: 301.858.3120

HOUSE BILL 620
Introduced:

By: Delegates A. Miller, Fraser-Hidalgo, Chang, Glass, Hornberger, Miele, Moon, Platt, B. Robinson, Smith, and Zucker

Introduced and read first time: February 12, 2015

Assigned to: Judiciary

WHAT IS HAPPENING IN MARYLAND?

Miller et al. have introduced the MD [House Bill 620](#) concerning Crimes – Unmanned Aircraft Systems - Unauthorized Surveillance on February 12, 2015.

I also found a MD Department of Commerce UAS AND MARYLAND: OPPORTUNITY AND ACCOUNTABILITY report document published in 2015 with connotation, “[MARYLAND GENERAL ASSEMBLY CH 164, ACTS OF 2015](#)” with **no mention of Bill 620**. This document is useful to make one familiar with technicality and statistics needed for legislation.

However, I found the Maryland General Assembly CH 164 has no mention of UAS or UAV but it is different. Open Reference_3. This document says Chapter 164 is Senate Bill 381. **Am I missing something?**

Furthermore the document in Reference 2 published in 2015 needs updates as well. [Reference 4](#) (published in 2016).

August 24, 2016 issue with MD police using surveillance....

BALTIMORE - The Baltimore Police Department has secretly deployed a surveillance system using planes and powerful cameras that can continuously record 30-square-mile sections of the city at once, according to Bloomberg News. See [Reference 5](#).

Legislation

<http://mgaleg.maryland.gov/webmga/frmMain.aspx?pid=billpage&stab=01&id=hb0620&tab=subject3&ys=2015rs>

Reference_1: <http://mgaleg.maryland.gov/2015RS/bills/hb/hb0620F.pdf>

Referene_2: <http://commerce.maryland.gov/Documents/ProgramReport/Maryland-UAS-report.pdf>

Reference_3: “[298 LAWS OF MARYLAND CH. 164](#)”

Reference_4: Updates (August 2016) in technology etc., Michael Behar, Air & Space Magazine, August 2016. <http://www.airspacemag.com/flight-today/drone-tests-180960069/?no-ist>

Save the following research for other recitations –

ADS C (ADS Contract)

[http://www.skybrary.aero/index.php/Automatic_Dependent_Surveillance_-_Contract_\(ADS-C\)](http://www.skybrary.aero/index.php/Automatic_Dependent_Surveillance_-_Contract_(ADS-C))

ADS-B

ADS-B is automatic because no external stimulus is required; it is dependent because it relies on on-board systems to provide surveillance information to other parties. Finally, the data is broadcast, the originating source has no knowledge of who receives the data and there is no interrogation or two-way contract.

<http://www.skybrary.aero/index.php/ADS-B>

ADS

http://www.skybrary.aero/index.php/Automatic_Dependent_Surveillance

Difference between ADS-B and ADS-C

Automatic Dependent Surveillance (ADS) is a surveillance technique in which aircraft automatically provide, via a data link, data derived from on-board navigation and position-fixing systems, including aircraft identification, four-dimensional position and additional data as appropriate. (ICAO Doc 4444:PANS-ATM)

ADS data is displayed to the controller on a screen that replicates a radar screen. ICAO Doc 4444 PANS-ATM notes that [air traffic control service](#), may be predicated on the use of ADS provided that identification of the aircraft involved is unambiguously established.

Two main versions of ADS are currently in use:

- **Automatic Dependent Surveillance-Broadcast (ADS-B)** is a function on an aircraft or surface vehicle that broadcasts position, altitude, vector and other information for use by other aircraft, vehicles and by ground facilities. It has become the main application of the ADS principle.
- **Automatic Dependent Surveillance-Contract (ADS-C)** functions similarly to ADS-B but the data is transmitted based on an explicit contract between an ANSP and an aircraft. This contract may be a demand contract, a periodic contract, an event contract and/or an emergency contract. ADS-C is most often employed in the provision of ATS over transcontinental or transoceanic areas which see relatively low traffic levels.

Police Secretly Put Large Part of Baltimore Under Constant Aerial Video Surveillance

August 24, 2016

CONTACT:

Josh Bell, ACLU, 212-549-2508, jbell@aclu.org

Meredith Curtis Goode, ACLU of Maryland, 410-889-8550 ext. 115, curtis@aclu-md.org

BALTIMORE - The Baltimore Police Department has secretly deployed a surveillance system using planes and powerful cameras that can continuously record 30-square-mile sections of the city at once, according to Bloomberg News.

The technology, which is run by a private company, was originally developed for the Defense Department for use in Iraq. It stores the video footage for an undetermined amount of time, and police can use it to retroactively track any pedestrian or vehicle within the surveillance area.

David Rocah, senior staff attorney for the American Civil Liberties Union of Maryland, had this reaction:

"The fact that the BPD has been engaged in a secret program of mass surveillance is both incomprehensible and unacceptable. It is even more astounding that this could be done during a Justice Department investigation into the BPD that found pervasive racial bias and lack of accountability.

"The surveillance program itself is a privacy nightmare come to life and precisely what we have warned against for years. It's the equivalent of requiring each of us to wear a GPS tracker whenever we leave our homes, something that would never be tolerated in the physical world.

"This is yet another example of battlefield technology moving to domestic law enforcement without public scrutiny - but Baltimore is not a battlefield, and its residents are not the enemy. The BPD should immediately discontinue its use of the technology, and the City Council should immediately hold hearings to prevent it from ever being adopted. The council should also require public input before any new surveillance technologies are deployed."

Reference_5: http://aclu-md.org/press_room/286

WHAT IS HAPPENING IN OTHER STATES

Alaska:

<https://www.commerce.alaska.gov/web/Portals/6/pub/UAS%20Operator%20Guidelines%2010-1-15.pdf>

Connecticut (2014):

Open the following using Google Browser

<https://www.cga.ct.gov/pri/docs/2014/Drone%20Use%20Regulation%20Staff%20Findings%20and%20Proposed%20Recs%20vmeeting.pdf>

Florida Dept. of Transportation:

<http://www.dot.state.fl.us/aviation/uas.shtm>

New Jersey

Synopsis of Senate, No. 2702, State of New Jersey 215th Legislature Introduced April 25, 2013. Updated June 20, 2013.

“Sets forth certain standards to be followed by law enforcement agencies and fire departments when utilizing drones.”

http://www.njleg.state.nj.us/2012/Bills/S3000/2702_R2.PDF

Related news/references:

New Jersey passes drone rules:

http://www.nj.com/politics/index.ssf/2013/06/nj_senate_passes_drone_regulations.html

Oregon

Nice site having all information about aviation, FAA, and Unmanned Ariel Vehicles (UAV)

<http://www.oregon.gov/aviation/Pages/index.aspx>

Oregon’s Report very detailed:

The following site displays well with Google

http://www.oregon.gov/aviation/docs/UAS_Legislative_Report.pdf

STATUS OF 50 State Legislation of UAS

[See Reference 6](#)

(Note: We have updates Maryland status in the table)

State	Passed	Protects	Emergency	Covers Due	Aviation	Registers	Comments
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	Legislation	Privacy	Response	Process	Safety	UAS	
Alabama	Yes, SB 240	Prohibits harassment of hunters					
Alaska	Yes, HB 255, HR 15			Covers procedures and standards for LEO. Requires training and certification of operators	University of Alaska Training program for operators		HR 15 Authorizes Legislative UAS task force SNR Note: Univ. of Alaska, Fairbanks is a UAS Test Site
Arizona	None passed						
Arkansas	None passed						
California	No, Bill 1327 vetoed by governor						
Colorado	None passed						Parks and Wildlife prohibited use of UAS for assisting hunting
Connecticut	Not proposed						
Delaware	None proposed						
District of Columbia (DC)	Permanent NOTAM prohibiting overflight						But this is an issue for Drone
Florida	yes, HB 119			Freedom from unwanted surveillance act; restricts law enforcement without warrant			
Georgia	Not passed						
Hawaii	Not passed						State legislature approved \$100K for UAS research and training
Idaho	yes, SB 1134	no photography without consent with civil penalty of \$1,000		no surveillance without warrant or reasonable suspicion of criminal conduct. No surveillance of farm, diary,			

				ranch or other Ag industry/ excludes LEO engaged in Marijuana eradication.			
Illinois	Yes, SB 2937	Prohibits harassment of hunters with UAS	loosens regulations of LEO during disaster or emergency	includes how law enforcement can use third party UAS data.			
Indiana	yes, HB 1009	creates law of "unlawful photography and surveillance on private property as class A misdemeanor		Creates warrant requirements for police use and geo-location tracking			
Iowa	Yes, HF 2289			Illegal to enforce traffic laws with UAS. Requires warrant or other lawful means by LEO			Requires Dept. of Public Safety to develop guidelines for use of UAS
Kansas	None passed						
Kentucky	None passed						
Louisiana	yes, HB 1029			Creates crime of unlawful use of a UAS for UAS to conduct surveillance without owner's permission	also creates crime of unlawful aiming of laser at an aircraft		\$500 fine and 6 months imprisonment/ second offense \$1,000
Maine	No, bill passed both chambers, vetoed by Governor						
Maryland	HB 620 introduced None passed						
Massachusetts	None proposed						
Michigan	None passed						
Minnesota	None passed						

Mississippi	????						
Missouri	None passed						
Montana	Yes, SB 196			Requires search warrant or judicially recognized exceptions unless on public land or international border.			
Nebraska	None passed						
Nevada	None passed						Legislature appropriated \$4 million for FAA selected UAS test sites
New Hampshire	None passed						
New Jersey	No, GOV pocket vetoed						
New Mexico	None passed						
New York	None passed						SNR Note: Griffiss International Airport is FAA selected UAS test site
North Carolina	Yes, SB 744	Prohibits any entity from conducting UAS surveillance or taking photo without permission. Creates civil cause of action for privacy violation.	OK for UAS to counter acts of terrorism, oversee public gatherings.	Prohibits any entity from conducting UAS surveillance or taking photo without permission. Creates civil cause of action for privacy violation.	Requires State Division of Aviation to create UAS knowledge and skills test for state agencies. prohibits weaponized UAS.	Creates offense of operating without a UAS license issued by the state.	Prohibits interference with UAS, unlawful fishing or hunting, unlawful distribution of images created by UAS.
North Dakota	None passed						Similar to Nevada, the Legislature appropriated \$4 million for FAA selected UAS test sites
Ohio	Yes, HB 292						HB 292 Creates Aerospace and Technology Committee for R&D UAS

							technology
Oklahoma	None passed						
Oregon	Yes, HB 2710	Civil penalty for flight below 400 ft. AGL over private property		requires warrant and destruction of images collected without consent	Prohibits weaponization of UAS	requires registration of public use UAS	prohibits use of laser to target or interference with lawful use of UAS. Has State level preemption clause.
Pennsylvania	None passed						
Rhode Island	None passed						
South Carolina	None passed						
South Dakota							
Tennessee	Yes, SB 1777	Class C misdemeanor to track video surveillance of person hunting and fishing without consent, prohibits surveillance or photography of individual or possess images	allows UAS if required to counter terrorists				Identifies 18 lawful uses of UAS under FAA regulations.
Texas	yes, HB 912	list of covered illegal activities to take images without authorization, imposes civil penalties of up to \$5,000	allows use to assess disaster or emergency, scenes of hazmat spills	long list of covered activities with UAS including search, investigation of crime scenes, auto accidents, SAR, fire suppression			Requires LEO to do biennial written report to legislature and governor on UAS usage and costs SNR note: A&M University Corpus Christi is a USA Test Center
Utah	yes, SB 167			Requires warrant for UAS data, establishes standards for third party UAS data turned over to policy, Requires LEO to keep data			Law notes it is not intended to "prohibit or impede the public and private research, development or manufacture of UAVs."

				and submit annual report to Dept. of Public Safety			
Vermont	None passed						
Virginia	yes, HB 2012						Placed moratorium on all UAS exception for SAR and amber alert SNR Note: Virginia Polytechnic Institute & State University is FAA UAS Test Site.
Washington	No, GOV vetoed HB 1771						
West Virginia	None passed						
Wisconsin	Yes, SB 196	misdemeanor for person who uses drone in place where there is reasonable expectation of privacy		Requires Warrant for use of UAS	Prohibits weaponized drone as a felony		
Wyoming	None passed						

FAA ACTIVITIES

<https://www.faa.gov/uas/faqs/>
https://www.faa.gov/uas/programs_partnerships/coe_test_sites/

Press Release - Drone Advisory Committee to Hold Inaugural Meeting
Drone Advisory Committee Meeting:

The inaugural Drone Advisory Committee Meeting will occur at 9:00 a.m. on Sept. 16, 2016 at the Center for Strategic and International Studies, 1616 Rhode Island Avenue, NW, Washington, DC, 20036.

http://www.faa.gov/news/press_releases/news_story.cfm?newsId=20754&cid=TW471

By AUVSI

<http://www.auvsi.org/blogs/auvsi-news/2016/09/20/automated-vehicle-guidance-launches-framework-for-public-discussion-vehicle-integration>

DOT

<https://www.transportation.gov/AV>

OTHER MISC ITEMS:

Drone Pilot shortage:

http://www.nytimes.com/2016/09/06/us/air-force-drones-terrorism-isis.html?_r=0

Reference_6: Status of 50 State Legislation of UAS published by Oregon: (the following site displays well with Google)

http://www.oregon.gov/aviation/docs/UAS_Legislative_Report.pdf

UAS TEST SITES

[Where to Fly](#)

[Frequently Asked Questions/Help](#)

[Programs, Partnerships and Opportunities](#)

[Drone Advisory Committee](#)

[Focus Area Pathfinder Program](#)

[UAS Detection Initiative](#)

[Center of Excellence/Test Sites](#) ➔

[UAS in the Arctic](#)

[Resources](#)

[Contact Us](#)

[Report an Accident](#)

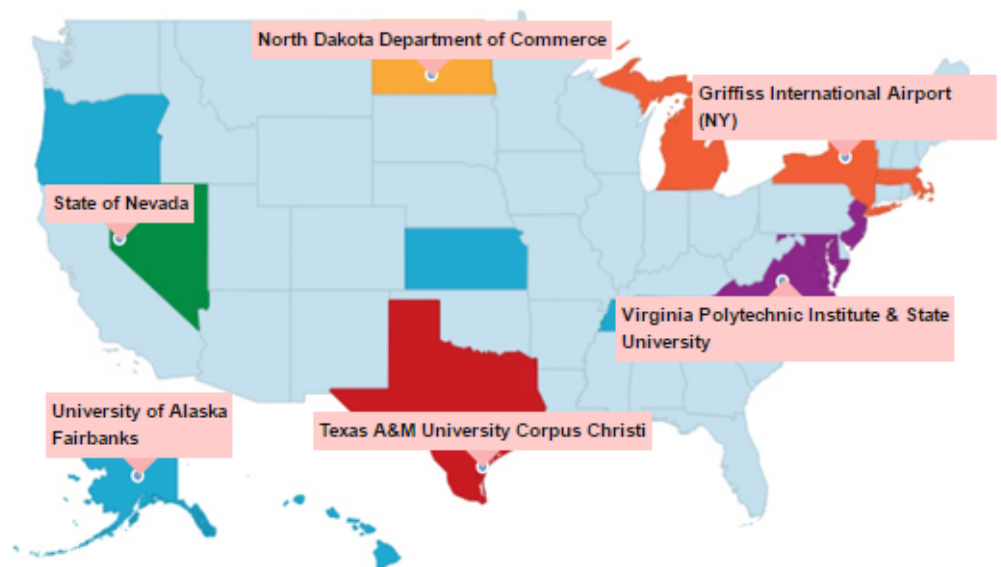
[Request a Waiver/Airspace Authorization](#)

Center of Excellence (COE)

The FAA UAS Center of Excellence – the [Alliance for System Safety of UAS through Research Excellence \(ASSURE\)](#) – is comprised of 22 of the world's leading research institutions, led by Mississippi State University. It focuses on research, education, and training in areas critical to safe and successful integration of UAS into the nation's airspace.

FAA Test Sites

Selected in December 2013, the UAS Test Sites support UAS integration by providing an avenue for the UAS industry and stakeholder community to conduct more advanced UAS research and operational concept validation.



For more information, visit the Test Site links below:

- [North Dakota Department of Commerce](#)
- [State of Nevada](#)
- [University of Alaska Fairbanks](#)
- [Texas A&M University Corpus Christi](#)
- [Virginia Polytechnic Institute & State University](#)
- [Griffiss International Airport \(NY\)](#)

Reference:

https://www.faa.gov/uas/programs_partnerships/coe_test_sites/

Testing drones for safety:

<http://www.intertek.com/it-telecoms/drones/?gclid=CN-ujZDigs8CFUxbhgodWaYBTQ>

US Airlines Talk Benefits of NextGen, Impact of Drones

Woodrow Bellamy III

[Avionics Magazine 09-15-2016] Executives from Alaska Airlines, JetBlue and UPS attended the annual Airlines for America (A4A) commercial aviation summit Tuesday, Sept. 14, to discuss the impact of the NextGen rollout on their operations. During the summit, the three airlines spoke to some of the ways their current and future operations are being affected by the FAA's continued deployment of its NextGen airspace modernization program, as well as the integration of commercial Unmanned Aircraft Systems (UAS), more popularly known as drones, into the National Airspace System (NAS).

http://www.aviationtoday.com/av/unmanned-aircraft-systems/88652.html?hq_e=el&hq_m=3284796&hq_l=1&hq_v=8e3360d1d1

Pittsburgh residents get ready for driverless cars

<https://www.washingtonpost.com/news/the-switch/wp/2016/09/13/ubers-biggest-challenge-isnt-self-driving-cars-its-persuading-nervous-riders-to-trust-them/>

Self-driving cars (policy recommendations)

<https://www.washingtonpost.com/news/the-switch/wp/2016/10/24/michael-bloombergs-plan-to-get-cities-ready-for-self-driving-cars/>

Other automated car incident references:

https://www.washingtonpost.com/local/trafficandcommuting/will-driverless-cars-really-save-millions-of-lives-lack-of-data-makes-it-hard-to-know/2016/10/18/6a678520-8435-11e6-92c2-14b64f3d453f_story.html

Autonomous cars safety issues

https://www.washingtonpost.com/local/trafficandcommuting/as-cars-become-more-reliant-on-computers-government-moves-to-protect-against-cyber-attacks/2016/10/24/cc0e4b62-9a0e-11e6-b3c9-f662adaa0048_story.html

GLOSSARY:

HB – House Bill

HF – House File (used by Iowa)

SB – Senate Bill

SF – Senate File (used by Iowa)