HB 255

<TARGET><BILL>HB 255</BILL><SUBJECT>HB 255</SUBJECT><COMM>HJUD28</COMM></TARGET>

HOUSE COMMITTEE REPORT

(7)
Date Referred to Committee: February 5, 2014 **FURTHER REFERRALS:**

Date of Committee Action: 3/7/14

The JUDICIARY Committee considered: **HB 255**

HOUSE BILL NO. 255
"An Act relating to unmanned aircraft systems; and relating to images captured by an unmanned aircraft system."

HB 255 UNMANNED AIRCRAFT SYSTEMS

Recommends it be replaced with [ ] HCS *or* [✓] CS *for* HB 255 (JUD)
For Senate Bills with new title: [ ] Technical Title [ ] New Title: HCR_____ **[✓] Same Title [ ] New Title**

[ ] attach amendments
[ ] add new referral to _____Committee
[ ] Letter of Intent_____Committee

List of Abbrev for Depts.:
ADM
CED
COR
CRT
EED
DEC
DFG
GOV
DHS
LWF
LAW
LEG
MVA
DNR
DPS
REV
DOT
UA

***NEW* FISCAL NOTES**
*FN# is assigned by Chief Clerk's Office

*FN#	List by Dept(s):	Fiscal	Indet.	Zero

***PREVIOUS* FISCAL NOTES**

FN#	List by Dept(s):	Fiscal	Indet.	Zero
1	LAW			✓
2	DPS			✓
3	UA			✓

Signing with recommendations	**Printed Last Name**	**DP**	**DNP**	**NR**	**AM**
	Pruitt	X			
	LYNN	X			
	Gruenberg	✓			
	Foster	X			
Chair:	Keller	X			
Chair:					

28-LS1068\Y

CS FOR HOUSE BILL NO. 255(JUD)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-EIGHTH LEGISLATURE - SECOND SESSION

BY THE HOUSE JUDICIARY COMMITTEE

Offered:
Referred:

Sponsor(s): REPRESENTATIVES HUGHES, HIGGINS, THOMPSON, AND PRUITT, Isaacson

A BILL

FOR AN ACT ENTITLED

"An Act relating to unmanned aircraft systems; and relating to images captured by an unmanned aircraft system."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

*** Section 1.** AS 14.40 is amended by adding a new section to read:

Sec. 14.40.082. Unmanned aircraft system training. The University of Alaska may establish a training program in the operation of unmanned aircraft systems.

*** Sec. 2.** AS 18.65 is amended by adding new sections to read:

Article 13. Law Enforcement Use of Unmanned Aircraft Systems.

Sec. 18.65.900. Use of unmanned aircraft systems. Except as provided in AS 18.65.900 - 18.65.909, a law enforcement agency may not use an unmanned aircraft system.

Sec. 18.65.901. Operational requirements for unmanned aircraft systems. (a) A law enforcement agency shall adopt procedures for the use of unmanned aircraft

systems. The procedures adopted under this section must require, at a minimum, that the law enforcement agency

(1) obtain any authorization, permit, or certificate required by the Federal Aviation Administration to operate the unmanned aircraft system;

(2) allow the unmanned aircraft system to be operated only by unmanned aircraft system pilots and crew members who have been trained and certified in the operation of the unmanned aircraft system and only under the supervision of officials trained in the policies and procedures governing the use of the unmanned aircraft system;

(3) provide that the flight of an unmanned aircraft system be approved by the commissioner or deputy commissioner of public safety or the chief administrative officer of the law enforcement agency or the officer's designee;

(4) ensure that the flight of an unmanned aircraft system be for a public purpose;

(5) maintain a record of each flight, including the time, date, and purpose of the flight, and the identity of the authorizing official;

(6) establish an auditable flight record system, including the documentation of a change in a flight time record;

(7) establish a method for notifying the public of the operation of an unmanned aircraft system, unless notifying the public would endanger the safety of a person;

(8) provide for community involvement in the development of the policies required in this section, including the consideration of public comment.

(b) In this section, "chief administrative officer" has the meaning given in AS 18.65.290.

Sec. 18.65.902. Use of an unmanned aircraft system by a law enforcement agency. A law enforcement agency may use an unmanned aircraft system

(1) to gather evidence in a criminal investigation

(A) under the express terms of a search warrant issued by a court; or

(B) in accordance with a judicially recognized exception to the

warrant requirement; or

(2) in situations and for uses not involving a criminal investigation and not intended to lead to the production of evidence for use in a criminal investigation, if the use does not constitute an unwarranted invasion of personal privacy and is consistent with the procedures in AS 18.65.901.

Sec. 18.65.903. Retention of images. (a) A law enforcement agency may not retain images captured by an unmanned aircraft system unless retention of the image is required

(1) as part of an investigation or prosecution;

(2) for training purposes; or

(3) by federal or state law or by municipal ordinance.

(b) Images that may not be retained under (a) of this section are confidential and are not public records under AS 40.25.100 - 40.25.295.

Sec. 18.65.909. Definitions. In AS 18.65.900 - 18.65.909,

(1) "law enforcement agency" has the meaning given in AS 12.36.090;

(2) "unmanned aircraft system" means an unmanned aircraft that is operated without direct human intervention from inside or on the aircraft and includes the associated support equipment, control station, data links, telemetry, communications, and navigation equipment necessary to operate the unmanned aircraft;

(3) "unmanned aircraft system crew member" means a person other than an unmanned aircraft system pilot who is assigned to duties related to an unmanned aircraft system during flight;

(4) "unmanned aircraft system pilot" means a person exercising control over an unmanned aircraft system during flight.

* **Sec. 3.** AS 29.10.200 is amended by adding a new paragraph to read:

(63) AS 29.35.146 (images captured by unmanned aircraft systems).

* **Sec. 4.** AS 29.35 is amended by adding a new section to article 2 to read:

Sec. 29.35.146. Regulation of unmanned aircraft systems. (a) A municipality may not adopt an ordinance that permits the release of images captured by an unmanned aircraft system in a manner inconsistent with AS 18.65.903.

(b) In this section, "unmanned aircraft system" has the meaning given in AS 18.65.909.

ALASKA STATE LEGISLATURE

SESSION ADDRESS:
Alaska State Capitol
Juneau Alaska 99801
Phone: 907-465-3743
Toll-free: 1-800-565-3743
Fax: 907-465-2381
Rep.Shelley.Hughes@akleg.gov

INTERIM ADDRESS:
600 E Railroad Avenue
Wasilla AK 99654
Phone: 907-376-3725
Fax: 907-376-4768

Representative Shelley Hughes
House District 8 ~ Greater Palmer

February 4, 2014

Honorable Representative Wes Keller, Chair
Judiciary Committee
State Capitol Room 120
Juneau, AK 99801

Dear Representative Keller,

I respectfully request a hearing date for HB255 Unmanned Aircraft Systems in the House Judiciary committee at your earliest convenience.

HB255 represents the work of the Legislative Task Force on Unmanned Aircraft Systems (UAS) that was assigned in HCR6 SLA13. The Task Force discussed privacy as the number one topic of concern from Alaskans. The end product of the Task Force is this piece of legislation that clearly defines the rules for law enforcement entities and encourages the University of Alaska to develop a UAS operations training program.

I'm also providing a copy of the Task Force Report to the Legislature on our findings and recommendations. We are very excited about the opportunities that Alaska has before her as we harness this technology for good and embrace this industry.

If you have any questions with regard to scheduling the bill, please contact Ginger Blaisdell at 465-5265.

Sincerely,

Shelley Hughes

Shelley Hughes
Representative
District 8~Greater Palmer

ALASKA STATE LEGISLATURE

SESSION ADDRESS:
Alaska State Capitol
Juneau Alaska 99801
Phone: 907-465-3743
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Rep.Shelley.Hughes@akleg.gov

INTERIM ADDRESS:
600 E Railroad Avenue
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Representative Shelley Hughes
House District 8 - Greater Palmer

Honorable Representative Wes Keller, Chair
Judiciary Committee
State Capitol Room 120
Juneau, AK 99801

HB255 Unmanned Aircraft Systems

Sponsor Statement

February 5, 2014

The Legislative Task Force on Unmanned Aircraft Systems (UAS) was formed under HCR 6 to review regulations and guidance regarding UAS and provide recommendations for a comprehensive state policy for unmanned aircraft that protects privacy and allows the use of UAS for public and private applications.

The Task Force reviewed multiple potential UAS scenarios focusing on privacy issues, economic development, public safety, anticipated mission types, and safety. The Task Force evaluated existing privacy laws for Alaska to avoid recommending duplicative law, and stressed the importance of public education to address concerns regarding UAS use in the state. The Task Force recognized the beneficial uses of UAS for life-saving, cost-saving and beneficial applications.

The Task Force discussed privacy as the number one topic of concern from Alaskans. The end product of the Task Force is this piece of legislation that clearly defines the rules for law enforcement entities and encourages the University of Alaska to develop a UAS operations training program.

HB255 also comes with a companion resolution to extend the duties and length of the Task Force for an additional three years to coincide with the FAA test site period for UAS in Alaska. The resolution will allow a continued and necessary review of the use of UAS in Alaska and further consider state laws to protect privacy, educate the public and be a central point of contact as we monitor this new industry.

The one change between the introduced legislation and the committee substitute is the removal of a requirement for all law enforcement agencies to adopt the International Association of Chiefs of Police UAS Guidelines for their internal operations. It was determined that the body of the bill already addresses the guidelines so would have been duplicative.

28-LS1068\P
Strasbaugh
3/4/14

CS FOR HOUSE BILL NO. 255(JUD)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-EIGHTH LEGISLATURE - SECOND SESSION

BY THE HOUSE JUDICIARY COMMITTEE

Offered:
Referred:

Sponsor(s): REPRESENTATIVES HUGHES, HIGGINS, THOMPSON, AND PRUITT, Isaacson

A BILL

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Article 13. Law Enforcement Use of Unmanned Aircraft Systems.

Sec. 18.65.900. Use of unmanned aircraft systems. Except as provided in AS 18.65.900 - 18.65.909, a law enforcement agency may not use an unmanned aircraft system.

Sec. 18.65.901. Operational requirements for unmanned aircraft systems. (a) A law enforcement agency shall adopt procedures for the use of unmanned aircraft

systems. The procedures adopted under this section must require, at a minimum, that the law enforcement agency

(1) obtain any authorization, permit, or certificate required by the Federal Aviation Administration to operate the unmanned aircraft system;

(2) allow the unmanned aircraft system to be operated only by unmanned aircraft system pilots and crew members who have been trained and certified in the operation of the unmanned aircraft system and only under the supervision of officials trained in the policies and procedures governing the use of the unmanned aircraft system;

(3) provide that the flight of an unmanned aircraft system be approved by the commissioner or deputy commissioner of public safety or the chief administrative officer of the law enforcement agency or the officer's designee;

(4) ensure that the flight of an unmanned aircraft system be for a public purpose;

(5) maintain a record of each flight, including the time, date, and purpose of the flight, and the identity of the authorizing official;

(6) establish an auditable flight record system, including the documentation of a change in a flight time record;

(7) establish a method for notifying the public of the operation of an unmanned aircraft system, unless notifying the public would endanger the safety of a person;

(8) provide for community involvement in the development of the policies required in this section, including the consideration of public comment.

(b) In this section, "chief administrative officer" has the meaning given in AS 18.65.290.

Sec. 18.65.902. Use of an unmanned aircraft system by a law enforcement agency. A law enforcement agency may use an unmanned aircraft system

(1) to gather evidence in a criminal investigation

(A) under the express terms of a search warrant issued under AS 12.35; or

(B) in accordance with a judicially recognized exception to the

warrant requirement in AS 12.35; or

(2) in situations and for uses not involving a criminal investigation and not intended to lead to the production of evidence for use in a criminal investigation, if the use does not constitute an unwarranted invasion of personal privacy and is consistent with the procedures in AS 18.65.901.

Sec. 18.65.903. Retention of images. (a) A law enforcement agency may not retain images captured by an unmanned aircraft system unless retention of the image is required

(1) as part of an investigation or prosecution;

(2) for training purposes; or

(3) by federal or state law or by municipal ordinance.

(b) Images that may not be retained under (a) of this section are confidential and are not public records under AS 40.25.100 - 40.25.295.

Sec. 18.65.909. Definitions. In AS 18.65.900 - 18.65.909,

(1) "law enforcement agency" has the meaning given in AS 12.36.090;

(2) "unmanned aircraft system" means an unmanned aircraft that is operated without direct human intervention from inside or on the aircraft and includes the associated support equipment, control station, data links, telemetry, communications, and navigation equipment necessary to operate the unmanned aircraft;

(3) "unmanned aircraft system crew member" means a person other than an unmanned aircraft system pilot who is assigned to duties related to an unmanned aircraft system during flight;

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(63) AS 29.35.146 (images captured by unmanned aircraft systems).

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Sec. 29.35.146. Regulation of unmanned aircraft systems. (a) A municipality may not adopt an ordinance that permits the release of images captured by an unmanned aircraft system in a manner inconsistent with AS 18.65.903.

(b) In this section, "unmanned aircraft system" has the meaning given in AS 18.65.909.

28-LS1068\O.2
Strasbaugh
2/20/14

AMENDMENT

OFFERED IN THE HOUSE BY REPRESENTATIVE HUGHES

TO: CSHB 255(STA)

Page 2, line 11, following the first occurrence of "the":

Insert "commissioner or deputy commissioner of public safety or the"

Page 2, lines 26 - 27:

Delete "**in a criminal investigation**"

Insert "**by a law enforcement agency**"

Page 2, line 27, following "system":

Insert "(1)"

Page 2, line 29:

Delete "(1)"

Insert "(A)"

Page 2, line 31:

Delete "(2)"

Insert "(B)"

Page 3, line 1, following "AS 12.35":

Insert "; or

(2) in situations and for uses not involving a criminal investigation and not intended to lead to the production of evidence for use in a criminal investigation, if the use does not constitute an unwarranted invasion of personal privacy and is

consistent with the procedures in AS 18.65.901"

Page 3, lines 8 - 9:

Delete all material and insert:

"(b) Images that may not be retained under (a) of this section are confidential and are not public records under AS 40.25.100 - 40.25.295."

LEGAL SERVICES

DIVISION OF LEGAL AND RESEARCH SERVICES
LEGISLATIVE AFFAIRS AGENCY
STATE OF ALASKA

(907) 465-3867 or 465-2450
FAX (907) 465-2029
Mail Stop 3101

State Capitol
Juneau, Alaska 99801-1182
Deliveries to: 129 6th St., Rm. 329

MEMORANDUM February 20, 2014

SUBJECT: Unmanned aircraft systems (CSHB 255(STA))
(Work Order No. 28-LS1068\O.2)

TO: Representative Shelley Hughes
Attn: Ginger Blaisdell

FROM: Kathleen Strasbaugh
Legislative Counsel

Please find enclosed the amendment to CSHB 255(STA) that you requested.

I understand that the state archivist is concerned about the provision of proposed AS 18.65.903 that forbids the retention of images captured by an unmanned aircraft system unless certain conditions are met. The bill does provide that retained images are public records, but the archivist is concerned that even nonretained records are public records subject to retention under AS 40.21, and testified that this could be in conflict with the public records statutes. First, not all records held by public agencies are public records; records that do not need to be preserved for their "informational value or as evidence of the organization or operation of the public agency." AS 40.25.220(3). The images in proposed AS 18.65.903 that may not be retained are not retained because they have no such use. And, if there is a conflict, it can be reconciled by adjusting the retention schedule to designate the unneeded images as not subject to retention.[1] However, it may be wise to amend the bill to address the issue, and I have included such an amendment to avoid interpretive difficulties.

If I can be of further assistance, please advise.

KJS:ray
14-071.ray

Enclosure

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[1] The archivist, in consultation with executive branch departments and subject to approval by the attorney general, establishes standards for retaining and disposing of state records. AS 40.21.030(a)(3) and (b)(11).

Fiscal Note

State of Alaska
2014 Legislative Session

Bill Version: HB 255
Fiscal Note Number:
() Publish Date:

Identifier: HB255-LAW-CRIM-01-24-14
Title: UNMANNED AIRCRAFT SYSTEMS
Sponsor: ** HUGHES, HIGGINS
Requester: (H) STATE AFFAIRS

Department: Department of Law
Appropriation: Criminal Division
Allocation: Criminal Justice Litigation
OMB Component Number: 2202

Expenditures/Revenues

Note: Amounts do not include inflation unless otherwise noted below. (Thousands of Dollars)

	FY2015 Appropriation Requested	Included in Governor's FY2015 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY 2015**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants & Benefits							
Miscellaneous							
Total Operating	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Fund Source (Operating Only)							
None							
Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Positions							
Full-time							
Part-time							
Temporary							
Change in Revenues							

Estimated SUPPLEMENTAL (FY2014) cost: 0.0 *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY2015) cost: 0.0 *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

ASSOCIATED REGULATIONS

Does the bill direct, or will the bill result in, regulation changes adopted by your agency? No
If yes, by what date are the regulations to be adopted, amended or repealed?

Why this fiscal note differs from previous version:

Initial version, not applicable.

Prepared By:	Loretta Withington, Division Operations Manager	Phone:	(907)465-5427
Division:	Administrative Services Division	Date:	01/24/2014 04:28 PM
Approved By:	Michael C. Geraghty, Attorney General	Date:	01/24/14
Agency:	Department of Law, Attorney General's Office		

FISCAL NOTE ANALYSIS

STATE OF ALASKA
2014 LEGISLATIVE SESSION

BILL NO. HB 255

Analysis

HB 255 requires a law enforcement agency to adopt procedures regarding the use of unmanned aircraft systems. These procedures must include several parts, including that every flight of the craft be approved by the chief administrative officer of the agency.

The bill allows the use of evidence obtained from such a system under a search warrant or an exception to the warrant requirement.

The Department of Law does not anticipate a fiscal impact.

Fiscal Note

State of Alaska
2014 Legislative Session

Bill Version: HB 255
Fiscal Note Number:
() Publish Date:

Identifier: HB255-UA-SYSBRA-1-27-14
Title: UNMANNED AIRCRAFT SYSTEMS
Sponsor: ** HUGHES, HIGGINS
Requester: House State Affairs

Department: University of Alaska
Appropriation: University of Alaska
Allocation: Budget Reductions/Additions - Systemwide
OMB Component Number: 1296

Expenditures/Revenues

Note: Amounts do not include inflation unless otherwise noted below. (Thousands of Dollars)

	FY2015 Appropriation Requested	Included in Governor's FY2015 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY 2015**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants & Benefits							
Miscellaneous							
Total Operating	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Fund Source (Operating Only)							
None							
Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Positions							
Full-time							
Part-time							
Temporary							
Change in Revenues							

Estimated SUPPLEMENTAL (FY2014) cost: 0.0 *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY2015) cost: 0.0 *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

ASSOCIATED REGULATIONS

Does the bill direct, or will the bill result in, regulation changes adopted by your agency?
If yes, by what date are the regulations to be adopted, amended or repealed?

Why this fiscal note differs from previous version:

Not applicable, initial version

Prepared By: Michelle Rizk Phone: (907)450-8187
Division: University of Alaska Date: 01/27/2014 08:00 AM
Approved By: Michelle Rizk Date: 01/27/14
Agency: University of Alaska

FISCAL NOTE ANALYSIS

STATE OF ALASKA
2014 LEGISLATIVE SESSION

BILL NO. HB255

Analysis

This bill states that the University of Alaska may establish a training program in the operation of unmanned aircraft systems; therefore passage of this bill in itself would not have a fiscal impact on the University.

Fiscal Note

State of Alaska
2014 Legislative Session

Bill Version: HB 255
Fiscal Note Number:
() Publish Date:

Identifier: HB255-DPS-DET-01-24-14
Title: UNMANNED AIRCRAFT SYSTEMS
Sponsor: ** HUGHES, HIGGINS
Requester: House State Affairs

Department: Department of Public Safety
Appropriation: Alaska State Troopers
Allocation: Alaska State Trooper Detachments
OMB Component Number: 2325

Expenditures/Revenues

Note: Amounts do not include inflation unless otherwise noted below. (Thousands of Dollars)

	FY2015 Appropriation Requested	Included in Governor's FY2015 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY 2015**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants & Benefits							
Miscellaneous							
Total Operating	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Fund Source (Operating Only)							
None							
Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Positions							
Full-time							
Part-time							
Temporary							
Change in Revenues							

Estimated SUPPLEMENTAL (FY2014) cost: 0.0 *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY2015) cost: 0.0 *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

ASSOCIATED REGULATIONS

Does the bill direct, or will the bill result in, regulation changes adopted by your agency? No
If yes, by what date are the regulations to be adopted, amended or repealed?

Why this fiscal note differs from previous version:

Not applicable, initial version.

Prepared By: Lieutenant Rodney Dial Phone: (907)254-1284
Division: Alaska State Troopers Date: 01/24/2014 11:09 AM
Approved By: Gary Folger, Commissioner Date: 01/24/14
Agency: Office of the Commissioner

FISCAL NOTE ANALYSIS

STATE OF ALASKA
2014 LEGISLATIVE SESSION

BILL NO. HB 255

Analysis

This bill requires law enforcement agencies to adopt procedures for the use of unmanned aircraft systems (UAS) and specifies the minimum requirements those procedures must contain, provides that a law enforcement agency may use a UAS in a criminal investigation under the terms of a search warrant or in an instance where there is an allowable exception to a search warrant, and specifies the circumstances under which images captured by a UAS may be retained.

The Department of Public Safety (DPS) would address procedures for the department's use of UAS in its Operating Procedures Manual. The other provisions of the bill address procedural issues related to the use of UAS by law enforcement agencies. Passage of this bill would have no fiscal impact to DPS.

Patrick Gamble, President
Phone: (907) 450-8000
Fax: (907) 450-8012
Email: ua.president@alaska.edu

UNIVERSITY of ALASKA
Many Traditions One Alaska

202 Butrovich Building
910 Yukon Drive
P.O. Box 755000
Fairbanks, AK 99775-5000

January 24, 2014

The Honorable Shelley Hughes
Legislative Affairs
State Capitol
Room 409
Juneau, AK 99801-1182

via email: rep.shelley.hughes@akleg.gov

Re: UAS test facility award

Dear Ms. Hughes:

As you have probably heard, the Federal Aviation Administration (FAA) announced on December 30 that the University of Alaska has been selected as one of six public entities that will develop unmanned aircraft systems (UAS) research and test sites around the country. I wanted to take this opportunity to thank you for your support of the university's successful efforts to seize a leadership role in the development and deployment of unmanned aircraft systems, and their safe integration into the national airspace.

Alaska has an abundance of natural resources, but its vast size and limited road access have provided substantial challenges for the management and utilization of those resources. Aviation is the only way to access large parts of the state. Recognizing the potential commercial and scientific benefits of the emerging technology of civilian unmanned aircraft systems over a decade ago, the University of Alaska Fairbanks Geophysical Institute (UAF-GI) began working aggressively with this technology, and rapidly became a world leader in civilian UAS.

In 2012, Congress passed the Federal Aviation Administration Modernization and Reform Act. Among other things, this Act addressed the issue of integrating unmanned aircraft systems into the national air space. It provided for the establishment of six separate UAS test ranges around the country aimed at safe implementation of these new technologies for commercial and scientific applications. An industry-commissioned study has predicted that more than 70,000 jobs would develop in the first three years after UAS restrictions are eventually eased by the FAA. Our own study suggests the numbers are much bigger, and can bring significant industry and jobs to Alaska.

Realizing the enormous opportunity for Alaska to develop and exploit the benefits of this new technology, and leveraging the work already done by UAF-GI, it was decided that the university would submit a proposal to operate one of these test sites. After a rigorous 10-month selection process involving 25 proposals from 24 states, the university team prevailed.

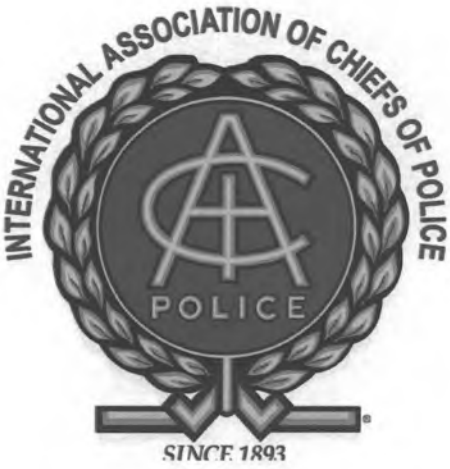
This success took a collective effort: the university, the Alaska Legislature, the offices of the governor and the lieutenant governor, and Alaska's congressional delegation were all involved. A critical element was the state's decision to appropriate $5 million to the university in the FY13 capital budget, to be used for "Research and Development of Unmanned Aerial Systems" and to help position UAF-GI to compete for one of the new UAS test ranges. This appropriation supplemented the significant external funding received by the university from a variety of federal and non-federal sources that support UAF-GI's Alaska Center for Unmanned Aircraft Systems Integration (ACUASI). It demonstrated the state's commitment to the project, and was an important factor in the FAA's decision. ACUASI anticipates 20 full-time employees by 2016, with the necessary funding coming from private investors and project work. In addition, the state legislature's efforts to establish a task force to pursue legislation that would both protect Alaskans' privacy while encouraging the industry here were another positive factor in the FAA's review of our proposal.

Again, my thanks for your support. Through collaborations like this, we will make a better future for Alaska.

Sincerely,

Patrick Gamble

cc: Brian Rogers, Chancellor, UAF
Mark Myers, Vice Chancellor for Research, UAF
Ro Bailey, Special Projects Coordinator, UAF
Greg Walker, Director, Alaska Center for UAS Integration, UAF
Bob McCoy, Director, Geophysical Institute, UAF
Chris Christensen, Associate Vice President for State Relations, UA System
Michelle Rizk, Associate Vice President, UA System



INTERNATIONAL ASSOCIATION OF CHIEFS OF POLICE

AVIATION COMMITTEE

Recommended Guidelines for the use of Unmanned Aircraft

BACKGROUND:

Rapid advances in technology have led to the development and increased use of unmanned aircraft. That technology is now making its way into the hands of law enforcement officers nationwide.

We also live in a culture that is extremely sensitive to the idea of preventing unnecessary government intrusion into any facet of our lives. Personal rights are cherished and legally protected by the Constitution. Despite their proven effectiveness, concerns about privacy threaten to overshadow the benefits this technology promises to bring to public safety. From enhanced officer safety by exposing unseen dangers, to finding those most vulnerable who may have wandered away from their caregivers, the potential benefits are irrefutable. However, privacy concerns are an issue that must be dealt with effectively if a law enforcement agency expects the public to support the use of UA by their police.

The Aviation Committee has been involved in the development of unmanned aircraft policy and regulations for several years. The Committee recommends the following guidelines for use by any law enforcement agency contemplating the use of unmanned aircraft.

DEFINITIONS:

1. **Model Aircraft** - A remote controlled aircraft used by hobbyists, which is manufactured and operated for the purposes of sport, recreation and/or competition.
2. **Unmanned Aircraft (UA)** – An aircraft that is intended to navigate in the air without an on-board pilot. Also called Remote Piloted Aircraft and "drones."
3. **UA Flight Crewmember** - A pilot, visual observer, payload operator or other person assigned duties for a UA for the purpose of flight.
4. **Unmanned Aircraft Pilot** - A person exercising control over an unmanned aircraft during flight.

COMMUNITY ENGAGEMENT:

1. Law enforcement agencies desiring to use UA should first determine how they will use this technology, including the costs and benefits to be gained.
2. The agency should then engage their community early in the planning process, including their governing body and civil liberties advocates.
3. The agency should assure the community that it values the protections provided citizens by the U.S. Constitution. Further, that the agency will operate the aircraft in full compliance with the mandates of the Constitution, federal, state and local law governing search and seizure.
4. The community should be provided an opportunity to review and comment on agency procedures as they are being drafted. Where appropriate, recommendations should be considered for adoption in the policy.
5. As with the community, the news media should be brought into the process early in its development.

SYSTEM REQUIREMENTS:

1. The UA should have the ability to capture flight time by individual flight and cumulative over a period of time. The ability to reset the flight time counter should be restricted to a supervisor or administrator.
2. The aircraft itself should be painted in a high visibility paint scheme. This will facilitate line of sight control by the aircraft pilot and allow persons on the ground to monitor the location of the aircraft. This recommendation recognizes that in some cases where officer safety is a concern, such as high risk warrant service, high visibility may not be optimal. However, most situations of this type are conducted covertly and at night. Further, given the ability to observe a large area from an aerial vantage point, it may not be necessary to fly the aircraft directly over the target location.
3. Equipping the aircraft with weapons of any type is strongly discouraged. Given the current state of the technology, the ability to effectively deploy weapons from a small UA is doubtful. Further, public acceptance of airborne use of force is likewise doubtful and could result in unnecessary community resistance to the program.
4. The use of model aircraft, modified with cameras, or other sensors, is discouraged due to concerns over reliability and safety.

OPERATIONAL PROCEDURES:

1. UA operations require a Certificate of Authorization (COA) from the Federal Aviation Administration (FAA). A law enforcement agency contemplating the use of UA should contact the FAA early in the planning process to determine the requirements for obtaining a COA.
2. UA will only be operated by personnel, both pilots and crew members, who have been trained and certified in the operation of the system. All agency personnel with UA responsibilities, including command officers, will be provided training in the policies and procedures governing their use.
3. All flights will be approved by a supervisor and must be for a legitimate public safety mission, training, or demonstration purposes.
4. All flights will be documented on a form designed for that purpose and all flight time shall be accounted for on the form. The reason for the flight and name of the supervisor approving will also be documented.
5. An authorized supervisor/administrator will audit flight documentation at regular intervals. The results of the audit will be documented. Any changes to the flight time counter will be documented.
6. Unauthorized use of a UA will result in strict accountability.
7. Except for those instances where officer safety could be jeopardized, the agency should consider using a "Reverse 911" telephone system to alert those living and working in the vicinity of aircraft operations (if such a system is available). If such a system is not available, the use of patrol car public address systems should be considered. This will not only provide a level of safety should the aircraft make an uncontrolled landing, but citizens may also be able to assist with the incident.
8. Where there are specific and articulable grounds to believe that the UA will collect evidence of criminal wrongdoing and if the UA will intrude upon reasonable expectations of privacy, the agency will secure a search warrant prior to conducting the flight.

IMAGE RETENTION:

1. Unless required as evidence of a crime, as part of an on-going investigation, for training, or required by law, images captured by a UA should not be retained by the agency.
2. Unless exempt by law, retained images should be open for public inspection.

Photos courtesy of Alaska Center for Unmanned Aircraft Systems Integration at the University of Alaska Fairbanks and Academy of Model Aeronautics.

Legislative Task Force on Unmanned Aircraft Systems

Interim Report to the Legislature

As required by Legislative Resolve 17 SLA-13

January 15, 2014

Legislative Task Force on Unmanned Aircraft Systems

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Task Force Members:

Representative Shelley Hughes, Co-Chair

Senator Donny Olson, Co-Chair

Lt. Steve Adams, Department of Public Safety

Mike O'Hare, Department of Military and Veterans' Affairs

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Steve Strait, Aviation Advisory Board

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APPENDICES

ACRONYMS AND ABBREVIATIONS

AMA	Academy of Model Aeronautics
ASTM	American Society for Testing and Materials
AUVSI	Association for Unmanned Vehicle Systems International
CBP	U.S. Customs and Border Protection
CFR	Code of Federal Regulations
COA	Certificate of Authorization
DHS	Department of Homeland Security
DOC	Department of Commerce
DoD	Department of Defense
DOT/PF	Alaska Department of Transportation/Public Facilities
FAA	Federal Aviation Administration
FMRA	FAA Modernization and Reform Act of 2012
GAO	Government Accountability Office
IACP	International Association of Chiefs of Police
ICAO	International Civil Aviation Organization
IPC	Interagency Policy Committee
NAS	National Airspace System
NASA	National Aeronautics and Space Administration
NextGen	Next Generation Air Transportation System
PPUTRC	Pan-Pacific UAS Test Range Complex
RT&D	Research, testing, and development
RTCA SC	Radio Technical Commission for Aeronautics Special Committee
SPC	Senior Policy Committee
STEM	Science, Technology, Engineering, and Math
UAS	Unmanned Aircraft Systems

EXECUTIVE SUMMARY

The Legislative Task Force on Unmanned Aircraft Systems (UAS) was formed under House Concurrent Resolution No. 6 to review regulations and guidance regarding UAS and provide recommendations for a comprehensive state policy for unmanned aircraft that protects privacy and allows the use of UAS for public and private applications.

In response to public concern, the Legislative Task Force on UAS (LTFUAS) reviewed multiple potential UAS scenarios focusing on privacy issues, economic development, public safety, anticipated mission types, and safety. LTFUAS evaluated existing privacy laws for Alaska to avoid recommending duplicative law for UAS, considered ways to encourage the economic development and safe uses of UAS in Alaska, and supported public education to address public reservations regarding UAS use in Alaska as well as provide information on the use of UAS for life-saving and other cost-saving and beneficial applications for dull, dirty and dangerous tasks.

LTFUAS concluded that the Federal Aviation Administration (FAA) is adequately addressing the safety concerns of integrating UAS into the National Airspace System (NAS). FAA Guideline N 8900.227 clearly states the requirements for the aircraft, pilot training and responsibilities, and the expectations of the test sites for safe operations of UAS. The FAA guidelines provided LTFUAS assurance that unmanned aircraft can be operated safely in Alaska.

After understanding the role of the FAA and safety goals for integration of UAS into the NAS, the LTFUAS makes the following recommendations.

1. All state and local law enforcement entities should adopt the International Association of Chiefs of Police (IACP) guidelines to help ensure privacy protection for Alaskans.
2. All law enforcement entities must first obtain a court order to use UAS over private property for criminal investigation against any person.
3. Encourage all law enforcement entities to use high-visibility marking or navigational lighting on law enforcement UAS as appropriate.
4. Convey a clear message to industry that Alaska is open for business to harness the beneficial uses of UAS, to encourage the growth of this economic sector, and to allow Alaska to continue to lead the nation in aviation innovation.
5. Encourage private and public UAS training programs.
6. Report all UAS incidents/accidents of aircraft larger than 55 pounds to the University of Alaska and/or Alaska Aviation Coordination Council.
7. Extend LTFUAS until June 30, 2017, and expand the duties of the Task Force with the addition of one member representing the Alaska Department of Transportation/Public Facilities (DOT/PF) and one public member, for the following reasons:

- During this transitional phase of growing use of UAS in Alaska, the LTFUAS should be extended to continue to monitor the integration and any privacy matters that may arise that are not already covered by existing law. Because Alaska currently has a strong set of privacy laws, rather than recommend prohibitions be incorporated into statute that might inhibit industry, the LTFUAS recommends it continue to review UAS operations in light of current statutes and only recommend changes in statute as necessary.

- Because FAA will be updating and issuing new guidelines based on the work of the new FAA UAS test sites announced on December 30, 2013, it is necessary for the LTFUAS to continue to review FAA policies to determine their impact and whether any additional policy changes at the state level may be necessary in response.

- With Alaska's recent selection as one of the nation's six UAS test sites through the University of Alaska's application (in conjunction with Oregon and Hawaii), the LTFUAS will meet part of the test site's requirement as a public forum where concerns regarding privacy and data matters can be collected and evaluated.

As we move forward, and particularly in light of the fact that Alaska has been selected as an FAA test site for UAS integration, and with the extension and expansion of duties of the Task Force, we continue emphasis on:

1) management of the test ranges,
2) economic development opportunities,
3) public education and public relations regarding UAS, and
4) difference between model aircraft and UAS.

In addition to the above seven recommendations, the Task Force also recommends the following:

1) each department of the State of Alaska identify a point of contact for UAS to coordinate with the LTFUAS and provide information regarding department policy and procedures to ensure accountability and privacy in regard to UAS use, and

2) the Alaska Department of Administration review and update its data retention policies particularly in the area of inadvertent captured data that is not relevant to a state agency.

Representative Shelley Hughes

Senator Donny Olson

1. INTRODUCTION

House Concurrent Resolution No. 6 formed the Legislative Task Force on Unmanned Aircraft Systems (UAS) to:

- review regulations and guidance from the Federal Aviation Administration (FAA) regarding UAS;
- provide written recommendations, together with suggested legislation, for a comprehensive state policy for unmanned aircraft that protects privacy and allows the use of UAS for public and private applications; and
- submit a final report to the Legislature.

The Legislative Task Force on UAS (LTFUAS) met in 2013 on July 24 and October 2 via teleconference and twice in person October 23-24 and November 26 to respond to the concerns Alaskans have raised regarding unmanned aircraft use in Alaska. The LTFUAS:

- reviewed regulations and guidance from the FAA, International Association of Chiefs of Police (IACP), and multiple related recommendations for UAS operations;
- received hours of public testimony and written public testimony; and
- compiled recommendations and suggested legislation for the use of UAS for public and private applications in Alaska that are protective of privacy.

The LTFUAS considered two approaches to regulating the use of UAS in Alaska:

1. restrict the industry and adopt exemptions for specific kinds of approved uses, or
2. generally allow UAS operations in Alaska and adopt the necessary privacy, operations, and other guidelines that seem necessary to protect Alaskans.

The LTFUAS adopted the second approach and emphasized that educating the public will be an important part of integrating this technology safely and for the benefit of Alaskans.

The LTFUAS concluded that the FAA is adequately addressing the safety concerns of integrating UAS in the National Airspace System (NAS). FAA Guideline N 8900.227 spells out the details of operating UAS by clearly stating the requirements of the aircraft, pilot training and responsibilities, and the expectations of the FAA UAS Test Sites.[1] The rules outlined in the guidelines provided the LTFUAS assurance that unmanned aircraft can be operated safely in Alaska.

The FAA also recently released its Final Privacy Requirements in November 2013. The privacy document from the FAA clearly identified that while it governs the NAS, local governments will assume the responsibility of addressing privacy concerns.

[1] Notice N 8900.227, Subj: Unmanned Aircraft Systems (UAS) Operation Approval. Effective Date 7/30/13, Cancellation Date 7/30/14. Available at http://www.faa.gov/documentLibrary/media/Notice/N_8900.227.pdf

Alaskans are fortunate to have a state constitution and state law that provide some of the greatest privacy protections compared to other states. As the LTFUAS reviewed multiple scenarios for misuse of the UAS, it determined that existing laws would apply, are sufficiently protective of privacy, and penalties are already in place to address inappropriate behavior.

When studying the many possible scenarios for misuse, the LTFUAS returned repeatedly to the premise that an unmanned aircraft is a tool; the operator needs to be considered for breaches of privacy or harming another.

This report presents the findings of the LTFUAS resulting from LTFUAS meetings, public testimony, research, and information from industry experts in pursuit of the assigned duties listed above.

1.1 Background and Planning

The earliest UAS was A.M. Low's "Aerial Target" of 1916 during World War I. The flight lasted 12 seconds. Over the last 50 years, rapid advances in aviation technology have transformed the world's skies. In the United States, the NAS has evolved to include a variety of fixed-wing and rotary aircraft operating across the country in metropolitan areas to remote airfields. As aircraft technology expands, so do the challenges associated with managing safe skies. UAS have created a critical integration challenge for the FAA as they are flown in an environment that was originally developed for manned aircraft.

1.1.1 Federal

In 2008, the Government Accountability Office (GAO) reported that the United States must develop a clear and common understanding of what is required to safely and routinely operate UAS in the NAS. Congress enacted the FAA Modernization and Reform Act of 2012 (FMRA). Through this act, Congress set forth a number of specific requirements for achieving UAS integration—namely a UAS Comprehensive Plan[2] and a five-year Roadmap.[3]

In April 2012 under the guidance of the Next Generation Air Transportation System (NextGen) Implementation Plan Senior Policy Committee (SPC), the Joint Planning and Development Office assembled the Departments of Transportation (DOT), Defense (DoD), Commerce (DOC), and Homeland Security (DHS) as well as the National Aeronautics and Space Administration (NASA) and the FAA to develop the UAS Comprehensive Plan. The UAS Comprehensive Plan sets the overarching integration of UAS into the NAS. The plan also supports the coordination and integration of research and development necessary to achieve UAS integration goals by 2015 (Title 14 of the Code of Federal Regulations, Part 91 [14 CFR 91]; Appendix A).

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[2] Unmanned Aircraft Systems (UAS) Comprehensive Plan. September 2013. Prepared by the Joint Planning and Development Office. Available at http://www.faa.gov/about/office_org/headquarters_offices/agi/reports/media/UAS_Comprehensive_Plan.pdf

[3] Integration of Civil Unmanned Aircraft Systems (UAS) in the National Airspace System (NAS) Roadmap. First Edition–2013. U.S. Department of Transportation Federal Aviation Administration. Available at http://www.faa.gov/about/initiatives/uas/media/uas_roadmap_2013.pdf

1.1.2 Federal and State Collaboration

One part of the UAS Comprehensive Plan included a priority for UAS research and development. NextGen developed the *NextGen UAS Research, Development and Demonstration Roadmap*.[4] and the FAA initiated a program for test ranges in accordance with the FMRA. In response to the FAA's solicitation for applications, the University of Alaska Fairbanks teamed with the States of Oregon and Hawaii and submitted the Pan-Pacific UAS Test Range Complex application.

On December 30, the FAA announced that Alaska was one of six states selected as a test site for safe operations and integration studies. The University of Alaska Fairbanks plans to work on state monitoring, navigation and safety standards.

1.1.3 State

Anticipating the integration of UAS in Alaska's NAS and the probable selection of Alaska as an FAA test site, HCR6 was passed to establish a task force to consider the implications of bringing this new technology to Alaska as early as spring 2014.

The FAA also recently released its Final Privacy Requirements in November 2013. The privacy document from the FAA clearly identified that while it governs the NAS, local governments will assume the responsibility of addressing privacy concerns.

Flight safety will continue to be monitored by the FAA. The State of Alaska will develop additional safety rules that pertain to specific kinds of UAS operations and will address the concern of personal privacy.

The LTFUAS approach is to responsibly embrace the positive uses of UAS without overregulating the industry and thus hindering economic opportunity. In addition to accepting the use of UAS in Alaska, the LTFUAS recognizes that public perception is greatly influenced through media reports, such as military flights in war zones. The public appears hesitant to allow UAS in Alaska due to fear of invasion of personal privacy and overreaching law enforcement.

1.2 Future of UAS in Our Skies

The FAA is expediting the planning and integration of UAS in the NAS because of the rapid advancements in this technology and the global response to the wide variety of uses by UAS. Unmanned aircraft will become part of our economy, transportation system, public safety, and much more.

Protecting the privacy of our citizens is the most important concern of the LTFUAS, and it remains at the forefront of each application of UAS missions. Alaska must respond quickly to this new technology in three ways: (1) support the integration of UAS in our airspace, (2) develop a forum to

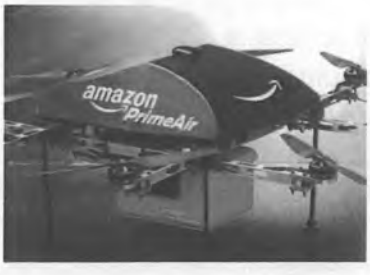
[4] Next Generation Air Transportation System, NextGen UAS Research, Development and Demonstration Roadmap. Version 1.0, March 15, 2012. Available at http://www.jpdo.gov/library/20120315_UAS%20RDandD%20Roadmap.pdf

review concerns and recommend legislation, and (3) educate the public. All of these approaches must work in unison to be successful and maintain personal privacy.

The UAS industry is changing as quickly as your imagination can conjure a new application for use. During the first week of December 2013, some headlines included:

- HexaCopter Used to Smuggle Contraband into Prison (Georgia, USA) ... similar report of misuse in Quebec, Canada, prisons.
- New Wave Energy wants to put power plants in the sky (London)... plans to build the first high altitude aerial power plant, using networks of unmanned aircraft that can harvest energy from multiple sources and transmit it wirelessly to receiving stations on the ground.
- ARA Nighthawk UAS Demonstrates Search and Rescue and Accident Reconstruction Value (Vermont State Police)... could provide benefits far outweighing (privacy) concerns.
- U.S. Navy Launches UAS from Submerged Submarine (Office of Naval Research)... rose to the ocean surface and then completed a vertical launch as part of its 12-hour mission.
- Louisville Hosts Quadcopter Battle (Louisville, KY)... you must be willing to remain in the same room as the quadcopter if the controls are given to a psychopathic 12 year old.
- United Nations UAS Deployment Debuts in Congo (Africa)... for the purposes of monitoring the volatile border with Rwanda and Uganda.

- Domino's UK tests pizza-delivering drones... the DomiCopter is undergoing further testing in the United Kingdom. (Other names previously considered included the "Pepperdroney" and the "Flyin' Hawaiian."
- Parrot Drones "Vulnerable to Flying Hack Attack" (Cambridge University, UK)... security researcher has created a flying contraption that can hijack control of other UAS ... this comes with new vocabulary "hackerspace."
- World's Smallest Quadcopter for Under $40 ... and it weighs only four-tenths of an ounce.
- UAS to Save and Change Lives (Philippines)... disaster relief.
- Robots of the Serengeti (Tanzania)... poaching surveillance.
- Amazon.com Delivery... spoof article, for now.



- Precision Farming Forum in Oregon to Examine UAS Technology in Agriculture ... presumed one of the most significant cost savings and deployment for UAS uses.

- Arinc Incorporated announced that it has partnered with the Anne Arundel County Public School System (AACPS) to develop a class on UAS for students participating in the Science, Technology, Engineering, and Math (STEM) magnet program. The course is believed to be the first of its kind in the nation for high school students.

Nearly every country on the planet is preparing for UAS in efforts that range from military actions and border patrol to research and development of UAS technology.

2. FEDERAL AVIATION ADMINISTRATION—SAFETY AND PRIVACY

From *Integration of Civil Unmanned Aircraft Systems (UAS) in the National Airspace System (NAS) Roadmap*:

"Since the early 1990s, unmanned aircraft systems (UAS) have operated on a limited basis in the National Airspace System (NAS). Until recently, UAS mainly supported public operations, such as military and border security operations. The list of potential uses is now rapidly expanding to encompass a broad range of other activities, including aerial photography, surveying land and crops, communications and broadcast, monitoring forest fires and environmental conditions, and protecting critical infrastructures.

The FAA created the Unmanned Aircraft Systems Integration Office to facilitate integration of UAS safely and efficiently into the NAS. Toward that goal, the FAA is collaborating with a broad spectrum of stakeholders, which includes manufacturers, commercial vendors, industry trade associations, technical standards organizations, academic institutions, research and development centers, governmental agencies, and other regulators."[5]

FAA 'Roadmap'

"Ultimately, UAS must be integrated into the NAS without reducing existing capacity, decreasing safety, negatively impacting current operators, or increasing the risk to airspace users or persons and property on the ground any more than the integration of comparable new and novel technologies."

2.1 Safety Guidelines

The LTFUAS studied the FAA Guidelines for the Operations of Unmanned Aircraft Systems, participated in a presentation of the guidelines from Ro Bailey, Deputy Director of the Alaska Center for Unmanned Aircraft Systems Integration at the University of Alaska Fairbanks, and sought comments from representatives of the FAA. FAA Guideline N 8900.227 provides the most current guidelines for federal approval of operating unmanned aircraft.[6]

The LTFUAS recognizes that the FAA manages the safety of the national airspace and has adopted extensive guidelines regarding aircraft certification, pilot training and certification, and approval process for flights (or missions). The FAA Guideline N 8900.227 also provides detailed requirements for the operations of pending test sites and the current approval of flights in designated areas for specific purposes. The FAA pre-approves UAS missions and awards a Certificate of Authorization (COA) that identifies the details of the mission. This process is tightly scrutinized, and the entity flying the UAS is accountable to the FAA under the details of the COA.

[5] Integration of Civil Unmanned Aircraft Systems (UAS) in the National Airspace System (NAS) Roadmap. First Edition–2013. U.S. Department of Transportation Federal Aviation Administration. Available at http://www.faa.gov/about/initiatives/uas/media/uas_roadmap_2013.pdf

[6] Notice N 8900.227, Subj: Unmanned Aircraft Systems (UAS) Operation Approval. Effective Date 7/30/13, Cancellation Date 7/30/14. Available at http://www.faa.gov/documentLibrary/media/Notice/N_8900.227.pdf

The COA approval process gives the LTFUAS confidence that safety of the national airspace is adequately considered and that UAS missions will not invade personal privacy or operate inappropriately.

It is the opinion of the LTFUAS that no additional statutory or regulatory requirements are needed for FAA-approved missions.

2.2 Privacy Concerns

2.2.1 FAA Final Privacy Requirements

The FAA recently published its Final Privacy Requirements, November 7, 2013 (Appendix A) regarding unmanned aircraft. The FAA recognizes that there is substantial debate and difference of opinion among policy makers, industry, advocacy groups, and members of the public as to whether UAS operations at the test sites will raise novel privacy issues that are not adequately addressed by existing legal frameworks.

FAA Final Privacy Requirements

On February 22, 2013, the FAA requested public comment on the proposed privacy requirements for UAS test sites that the FAA will establish pursuant to the FAA Modernization and Reform Act of 2012.

The FAA received 99 comments through Regulations.gov and 53 comments through the public engagement session.

The public comments were grouped into 10 categories, and the FAA provided a response to each category. You can view all categories, comments and responses in the document provided in Appendix A.

From the FAA Final Privacy Requirements:

There was substantial difference of opinion among commenters as to whether the UAS operations and manned aircraft operations present different privacy issues that justify imposing special privacy restrictions on UAS operations at the test sites. In addition, there was substantial difference of opinion regarding what elements would be appropriate for a test site privacy policy.

The FAA has determined that it should not impose privacy requirements beyond those in the Final Privacy Requirements for the following reasons.

First, there are many privacy laws and applications of tort law that may address some of the privacy issues that arise from UAS operations at the test sites.

Test Site Requirements

1. *Test site operators must maintain a record of all UAS operating in the test sites;*
2. *Test site operators must require every UAS operator in the Test Site to have a written plan for the operator's use and retention of data collected by the UAS; and*
3. *Test site operators must conduct an annual review of test site operations to verify compliance with stated privacy policy and practices and share those outcomes annually in a public forum with an opportunity for public feedback.*

Second, the FAA believes that the test site operators will be responsive to local stakeholders' privacy concerns and will develop privacy policies appropriately tailored to each test site.

Third, if UAS operations at a test site raise privacy concerns that are not adequately addressed by the test site's privacy policies, elected officials can weigh the benefits and costs of additional privacy laws or regulations. Forty-three states have already enacted or are considering legislation regulating use of UAS.

Conclusion: Based on the comments submitted, the FAA intends to require each test site operator to comply with all of the privacy requirements included in the Draft Privacy Requirements as well as the following additional privacy requirements:

1. Test site operators must maintain a record of all UAS operating in the test sites;
2. Test site operators must require every UAS operator in the test site to have a written plan for the operator's use and retention of data collected by the UAS; and
3. Test site operators must conduct an annual review of test site operations to verify compliance with stated privacy policy and practices, and share those outcomes annually in a public forum with an opportunity for public feedback.

It is the opinion of the LTFUAS that privacy policy is adequate through the FAA requirements for the use of UAS in the test sites.

2.2.2 Privacy and Civil Liberties Consideration

The FAA is implementing a UAS Test Site Program to help the FAA gain better understanding of operational issues relating to UAS. Although the FAA's mission does not include developing or enforcing policies pertaining to privacy or civil liberties, experience with the UAS test sites will present an opportunity to enhance the dialogue in the Interagency Policy Committee (IPC) and other interagency forums concerning the use of UAS technologies and the areas of privacy and civil liberties.

> *The Fourth Amendment is central to the privacy issues with respect to government UAS operation. Although the Supreme Court has never explicitly considered the question of UAS privacy, there is a long list of relevant precedents. Among them are several cases from the 1980s that specifically considered aerial observations and the Fourth Amendment.*

2.2.3 Homeland Security Privacy Impact Assessment

U.S. Customs and Border Protection (CBP) is responsible for guarding nearly 7,000 miles of land border, 2,000 miles of coastal waters, and 95,000 miles of maritime border. CBP employs several types of aircraft to achieve its mission objectives including UAS. COAs have been

Homeland Security

95,000 miles of maritime border security includes joint operations with the U.S. Coast Guard. Some of those miles include Alaska coastline.

authorized in Arizona, Texas, Florida, and North Dakota. When deploying resources for operations, the Office of Air and Marine must determine the availability of aircraft type and the integration of the requested activity into its flight operations.

Homeland Security addressed privacy in the Privacy Impact Assessment published September 9, 2013. A summary of privacy concerns addressed in their document includes:

- The collection and use of data from aerial surveillance remains within the scope of its authorities to protect the border and provide support for law enforcement activities while continuing to preserve a person's right to privacy.
- UAS present a perceived risk because they are able to fly for longer periods of time and conduct surveillance relatively undetected. While UAS can fly for longer periods of time, they are equipped with the same technology to conduct surveillance that is presently deployed on manned aircraft.
- Concern for the security of the UAS itself and the potential for hijacking of the unmanned aircraft are managed by the close monitoring of ground control and satellite communication by encrypted data. If one ground station were to lose contact, a second ground station is equipped to pick up the UAS and continue operations.

3. ALASKA STATE LAW—SAFETY AND PRIVACY

The LTFUAS is confident that the FAA will regulate safety of UAS flights in Alaska. While safety is critically important, the LTFUAS also recognizes that certain codes of conduct must be followed to ensure harmonious UAS operations in Alaska.

3.1.1 Self-Regulation by Three National Organizations

The LTFUAS considered the recommendations of the following three national organizations that have adopted rules and codes of conduct regarding UAS operations. The LTFUAS adopted the IACP rules in the legislation to be introduced this session.

- **IACP:** International Association of Chiefs of Police Recommended Guidelines (Appendix B) for the use of Unmanned Aircraft was adopted in August 2012. The Alaska Department of Public Safety has also adopted these guidelines as their doctrine with the exception of increasing the flight approval responsibility from a "supervisor" to the director's office.

- **AUVSI:** Association for Unmanned Vehicle Systems International states: "As an industry, it is incumbent upon us to hold ourselves and each other to a high professional and ethical standard. As with any revolutionary technology, there will be mishaps and abuses; however, in order to operate safely and gain public acceptance and trust, we should all act in accordance with these guiding themes and do so in an open and transparent manner. We hope the entire UAS industry will join AUVSI in adopting this industry Code of Conduct."[7]

- **AMA**: Academy of Model Aeronautics' *AMA Policies for Radio Controlled Model Aircraft Operations Utilizing First Person View. Failsafe. Stabilization and Autopilot Systems* guides model aircraft operators.[8]

In the same manner that the FAA does not regulate model aeronautics, the LTFUAS does not intend to adopt requirements of hobbyist activities using UAS.

3.1.2 Model Aircraft Rules and Definitions

The technology differences between unmanned aircraft systems and model aircraft used for sport or recreation use is narrowing each day. Technology is advancing by leaps and bounds, while at the same time becoming more affordable and integrated into off-the-shelf-systems for consumers and hobbyists. While there are many technical documents and references through the FAA Modernization and Reform Act, the general difference between UAS and model aeronautics is the operation and intent of the operator not the aircraft.

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[7] Unmanned Aircraft System Operations Industry "Code of Conduct." Accessed January 13, 2014. Available at http://www.auvsi.org/conduct

[8] AMA Policies for Radio Controlled Model Aircraft Operations Utilizing First Person View, Failsafe, Stabilization and Autopilot Systems. Revision 07/20/2013. AMA Advanced Flight Systems Committee Report 101. Available at http://www.modelaircraft.org/files/AFSCREPORT101.pdf

If the activity or intent of the activity is used for commercial operations or contributing the creation of the a product or service, it is considered commercial activity and it is subject to the FAA regulations and rule as stated in the FAA Modernization and Reform Act of 2012 and FAA UAS Road Map 2013.

If the activity is for sport and recreation use as defined by FAA SEC 336 SPECIAL RULE FOR MODEL AIRCRAFT of the Modernization Act, it is controlled by a cooperative agreement between the FAA and a Community Based Organization (CBO), such as the Academy of Model Aeronautics (AMA).

The AMA has been successful in self-regulating operations for hobbyists and aviation safety for over 77 years. During those 77 years, the AMA faced many challenges of new technologies such as analog to digital radio, coordinating operations within the airspace and the ever changing aircraft designs and capabilities not unlike the latest multi rotor and First Person View (FPV) capabilities. To address the current safety requirements and interest of model aircraft operators, the AMA has developed and updated its general safety code AMA Publication 105-Safety Code and it Advanced Aircraft rules publication 550-First Person View and 560-Autopilot effective Jan 1, 2014 to keep up with the FAA rule making and technology advances. Refer to Appendix C.

It was discussed that a notice should be provided at the time of purchase of each model aircraft to review the AMA flight operation guidelines for appropriate use of model aeronautics. The LTFUAS did not adopt a requirement for notice regarding hobbyists because so many aircraft are purchased outside of Alaska and would not be required to provide the notice.

Legal Services

Constitutional Protection of Privacy: *The Constitution of the State of Alaska explicitly protects the right of privacy against government intrusion. Art. I, sec. 22 provides: "The right of the people to privacy is recognized and shall not be infringed. The legislature shall implement this section."*

Alaska Statutory Protections:

AS 11.41.270 Stalking, nonconsensual conduct prohibits monitoring by technical means

AS 11.61.116 Sending an explicit image of a minor

AS 11.61.120(a)(6) Harassment: publishing or distributing certain images

AS 11.61.123 Indecent viewing or photography

AS 11.76.113 Misconduct involving confidential information in the first degree

AS 11.76.115 Misconduct involving confidential information in the second degree

3.1.3 Alaska State Law and Personal Privacy

The State of Alaska and its local governments cannot dictate the use of the national airspace but can consider rules that better define the FAA guidelines, can consider legal repercussion for entities found in violation of adopted laws, and can provide for specific privacy laws regarding the use of UAS in Alaska.

The State of Alaska Constitution provides privacy protection, "although not unlimited, has been held to be broader than the protection afforded by the United States Constitution. Both the Alaska Constitution and the Fourth Amendment to the United States Constitution require a warrant by a

governmental agency for the search of a place where a person has a reasonable expectation of privacy."[9]

Although much attention regarding UAS privacy focuses on government use and the Fourth Amendment, it is non-governmental use that is likely to raise some of the most significant privacy challenges in coming years. For private entities, the key constitutional question is the extent of their First Amendment privilege to gather information.

Civil use of unmanned aircraft will fall under the federal and state laws including such provisions as trespassing, invasion of privacy, intrusion upon seclusion, publication of private facts, stalking and harassment, and business privacy.

The LTFUAS, with guidance from Legislative Legal Services, considered many scenarios of possible violations of state and federal law that might occur with the use of unmanned aircraft. Legislative Legal Services provided the document, *Observations from Above: Unmanned Aircraft Systems and Privacy*,[10] that presented a variety of scenarios that have been tried in court and some that should be discussed as they pertain to UAS and personal privacy. The Legal Services memo outlining the areas of statute that protect personal privacy can be found in Appendix D.

Privacy protection scenarios considered by the LTFUAS include but are not limited to the following.

1. **If data is gathered by a government agency, it is a public record. However, AS 40.20.120 provides certain protections for private information. Use of inadvertently captured information in a criminal prosecution may depend on who captures the information and whether the person whose actions have been captured has a reasonable expectation of privacy.**

It was discussed that data captured by a government-operated UAS would be treated similarly to data captured by other technology such as cell phones, manned aircraft, satellite images, voice recorders, etc. Case law is substantial in determining if the person would be considered to have a reasonable expectation of privacy and when a warrant would be required to obtain and use any data collected.

CH 48 (HB65) SLA08 Personal Information Protection Act also addresses the collection, storage, and breach of privacy. This act would include any data captured by a UAS.

2. **As technology continues to advance beyond "normal" application of current laws, a balanced approach that recognizes the inherent difficulty in predicting the future must be adopted when drafting new laws.**

[9] Memorandum: Alaska Laws Protecting Privacy (Work Order No. 28-LS0990). September 30, 2013. Division of Legal and Research Services, Legislative Affairs Agency, State of Alaska, Juneau.

[10] John Villasenor. 2013. Observations from Above: Unmanned Aircraft Systems and Privacy. Harvard Journal of Law & Public Policy. Available at http://www.harvard-jlpp.com/wp-content/uploads/2013/04/36_2_457_Villasenor.pdf

The LTFUAS determined that we cannot foresee the future applications of technology (of UAS or other technologies); therefore, creating restrictions in law based on assumptions is not recommended.

Observations From Above: UAS and Privacy

This document was published in the Harvard Journal of Law and Public Privacy by John Villasenor, a senior fellow in Governance Studies and the Center for Technology Innovation, the Brookings Institution.

The Task Force discussed many of the scenarios posed by the author when considering the need for Alaska law.

3. How should Alaska manage unintentionally captured images or data?

Discussion concluded that there are adequate statutes, case law, and data retention guidelines that resolved the concerns of the LTFUAS in the area of unintentionally captured images or data.

Recommendation: The LTFUAS also would request that the Department of Administration review its data retention schedules with particular emphasis on law enforcement data captured inadvertently and allowing that data to be destroyed.

4. The tie between safety and privacy is tightest with respect to rules requiring the operator of a UAS to be able to see the aircraft at all times. Public UAS operated in association with the expedited authorizations in Section 334(c)(2)(C) of FMRA have a "line of sight" requirement.

The LTFUAS assumes that FAA regulations adopted in the next several years will continue to require visual line-of-sight operation. "Sense and avoid" technology will become more mature and some non-line-of-sight missions may be permitted by the FAA. Non-line-of-sight operations and other unknown technological advances may bring new challenges that will require the Legislature to review industry guidelines and state laws in the future.

5. Unmanned aircraft may bring efficient advances to law enforcement; however, the public seems to be highly sensitive to law enforcement using unmanned aircraft.

After reviewing many possible uses of UAS, the LTFUAS determined that existing law already affords the public with adequate protections.

- **Routine Technology**: The use of UAS is treated much the same as any other technological tool used to protect the public. The Department of Public Safety has adopted the IACP Guidelines for UAS, and the LTFUAS found those guidelines to be superior for rules of law enforcement use.

The rules of the IACP will be offered as a provision of the legislation.

- **Public Navigable Airspace:** The question of what constitutes "public navigable airspace" for UAS operated by the government is central to privacy policy. The LTFUAS found that almost every law enforcement scenario discussed was already protected by existing law.
- **Role of Imaging Technology:** Rules and case law exist that protect citizens from inappropriate use of capturing data that is "more than the human eye could ever see."
- **Extended Surveillance:** Law enforcement does not intend to use UAS for standard patrol activities at this time. Limiting flight hours was not seen as an acceptable control because long flights may be necessary in the event of search and rescue or natural disaster remediation operations.
- **Obtaining a Warrant:** After much discussion, it was decided that using UAS to gather data would require a warrant in similar situations as using any other data gathering device (such as voice recording, photography, and thermal imaging with manual technology). No additional laws are required to obtain a warrant for UAS data gathering.

Voluntary Approaches

The International Association of Chiefs of Police (IACP) adopted model guidelines for the use of UAS for law enforcement purposes.

The Association for Unmanned Vehicle Systems International (AUVSI) Code of Conduct calls for a commitment to "respect the privacy of individuals."

Academy of Model Aeronautics has also adopted operational policies and guidelines for advanced flight systems used in radio controlled model aircraft.

It is the understanding of the LTFUAS that all law enforcement entities must first obtain a court order to use UAS over private property for criminal investigation against any person. This will be offered as a provision of the recommended legislation.

- **Weaponized Aircraft:** FAA guidelines do not allow anything to be dropped from an unmanned aircraft.
- **Visibility**: Law enforcement is planning to use high-visibility marking on any UAS they will use. Application of navigational lighting and/or high-visibility paint is being considered.
- **Public Education**: It is apparent that public education is necessary for all agencies using UAS but sensitivity is heightened for law enforcement uses.

Law Enforcement

Public protection will benefit greatly from unmanned aircraft for the purposes of search and rescue, crash scene documentation time, natural disaster monitoring, wildfire management, amber and silver alerts, hostage situations, and other life safety extremes. Some efforts will require warrants to proceed and some will be allowed under a Certificate of Authorization (COA).

It is the opinion of the LTFUAS that existing privacy laws are adequate to govern the use of unmanned aircraft.

It is the opinion of the LTFUAS that since Alaska has been chosen as one of the FAA UAS Test Sites, we have the opportunity to participate in the use of UAS in a variety of ways that would put Alaska in the position to establish policy guiding the use of UAS for the rest of the United States to consider.

3.2 Technical Operations Guidelines

International Civil Aviation Organization (ICAO), a special agency of the United Nations, promotes "the safe and orderly development of international civil aviation throughout the world. It sets standards and regulations necessary for aviation safety, security, efficiency, and regularity, as well as aviation environmental protection."[11]

The goal of the ICAO in addressing unmanned aviation is to provide the fundamental international regulatory framework to support routine operation of UAS throughout the world in a safe, harmonized, and seamless manner comparable to that of manned operations.

> "A number of Civil Aviation Authorities have adopted the policy that UAS must meet the equivalent levels of safety as manned aircraft... In general, UAS should be operated in accordance with the rule governing the flight of manned aircraft and meet equipment requirements applicable to the class of airspace within which they intend to operate... To safely integrate UAS in non-segregated airspace, the UAS must act and respond as manned aircraft do. Air Traffic, Airspace and Airport standards should not be significantly changed. The UAS must be able to comply with existing provisions to the greatest extent possible."[12]

UAS Operations Guidelines

Technical rules for operating unmanned aircraft systems are clearly identified at a global and federal level. "A number of Civil Aviation Authorities have adopted the policy that UAS must meet the equivalent levels of safety as manned aircraft..."

FAA Guideline N 8900.227 specifically sets the rules for the technical operations of flying unmanned aircraft.

The FAA has established guidelines for the certification and airworthiness of the aircraft, certification of the pilot including additional instruction in operating specific UAS, flight operations with the test sites, management of the test site, and certificates of authorization (COAs) for particular missions.

The LTFUAS is confident in the FAA guidelines in protecting the safety of the national airspace.

3.3 Benefits to Alaska

The University of Alaska Fairbanks Center for Unmanned Aircraft Systems Integration, Research, Testing, and Development (RT&D) is a nationally recognized program that has shown responsible use of UAS for more than 10 years. The University has been selected by the FAA to be one of the six federal test sites. The University proposal contained a diverse set of test site range locations in

[11] ICAO web page: http://www.icao.int/about-icao/Pages/default.aspx

[12] *From* Circular 328 - Unmanned Aircraft Systems (UAS) (Cir 328 AN/190) as cited in Integration of Civil Unmanned Aircraft Systems (UAS) in the National Airspace System (NAS) Roadmap. First Edition–2013. U.S. Department of Transportation Federal Aviation Administration. Available at http://www.faa.gov/about/initiatives/uas/media/uas_roadmap_2013.pdf

seven climatic zones as well as geographic diversity with test site range locations in Hawaii and Oregon. The research plan includes the development of a set of standards for unmanned aircraft categories, state monitoring and navigation, as well as safety standards for UAS operations.

Numerous benefits that can be realized as Alaska takes the lead on this new technology are:

- Economic
- Policy Development
- Expedited Timeline for Test Range Use and Approved Missions
- Encourage University Pilot Training Program for UAS
- Education—Public Awareness
- Market Alaska as "Open for Business" for UAS
- Public Safety Statewide

3.3.1 Economic Benefit

Test Site Selection: As part of the University of Alaska's application to the FAA for selection as a test site, the McDowell Group was contracted to complete an economic evaluation of unmanned aircraft benefits for Alaska. *Economic Impact of a Pan-Pacific Unmanned Aircraft Systems Test Site* was completed May 2013 (Appendix E). The highlights of this report include:

> "In total, designation of PPUTRC [Pan-Pacific UAS Test Range Complex] as a UAS test site would be expected to generate 1,065 direct, indirect, and induced jobs in 2014, increasing to over 1,400 jobs by 2017. Total labor income would climb from $57 million in 2014 to about $76 million in 2017.
>
> In addition to direct jobs created from UAS firms, significant indirect and induced jobs will also be created. Indirect jobs represent jobs created throughout the supply chain to support the UAS industry and induced jobs represent jobs created due to changes in household consumption as a result of the UAS industry."[13]

In addition to Test Site Selection: The cost savings to government agencies in both man hours and safety risk is immeasurable at this time, but the LTFUAS realizes there will be many efficiencies gained with the use of this technology. Examples include but are not limited to:

- **More Accurate Biological Studies.** One specific marine mammal population count had been conducted by a single manned airplane flyover to film and later count the animals. The noise from the aircraft distressed the animals and many were on the move during the filming. With the UAS launched nearby, the animals were undisturbed and a more accurate count was completed. The more-accurate count gave biologists better data to determine such things as the health of the population and whether or not to include them on the endangered species list.

[13] Economic Impact of a Pan-Pacific Unmanned Aircraft Systems Test Site. May 2013. Prepared for Alaska Center for Unmanned Aircraft Systems Integration, University of Alaska Fairbanks. Prepared by McDowell Group.

- **Rapid Response of Air Assets for Traffic Resolution.** Several incidents along the Seward and Glenn highways, Alaska's primary road routes, have resulted in extended road closures up to 6 hours. For example, manual photography and mapping documentation conducted from the ground can keep a road closed for approximately 3 hours. Using a UAS to map an accident from the air can result in the road being opened in approximately 1 hour.
- **Accurate Data Collection Leading to Cost Savings.** UAS were used to determine the functioning ability of oil field smoke stacks that resulted in accurate data provided in 20 minutes, and information that showed the needed replacement of only one of three catalytic converters, saving the oil company approximately $1 million.
- **Facilitate Search & Rescue and Other Life-Saving Missions.** Many examples were discussed where human life safety was at significant risk and that UAS could be used to complete the mission.
- **Significant Cost Savings in Public Safety.** One state's law enforcement aircraft costs an average hourly rate of $700 and one aircraft (Super Cub) costs approximately $800,000, and the A-Star helicopter is $3.6 million. The average hourly cost of operating a UAS ranges from $30 to $50 per hour, and the aircraft costs range from a few hundred dollars to over $40,000.

3.3.2 Policy Development

Now that Alaska has been selected as one of the FAA test sites, the opportunity to develop regulations and guidelines for UAS missions nationwide can be realized.

The test site operators will provide opportunities for government agencies, industry, and researchers to access this airspace to aid in the integration of UAS regulations in the NAS. Additionally, data collection will support development and operations research, and professional development opportunities will be available for inspectors, airspace managers, air traffic controllers, and others. The specific goals described by the PPUTRC applicants are listed below.

- Develop a set of standards for select unmanned aircraft categories, for aircraft state monitoring, and navigation. [PPUTRC goals and objectives work will augment ongoing standards work with research on categories of UAS not yet addressed, and evaluations needed to refine emerging standards under consideration.]
- Validate FAA acceptable risk thresholds or safety management system standards for UAS operations.
- Identify safety factors in UAS design.
- Validate certification standards, including protocols for air traffic control interaction.
- Define and qualify underlying assumptions and a minimum set of air vehicle characteristics critical to safety, reliability, etc.
- Develop effective, compliant "sense and avoid" systems to satisfy regulatory guidance.

- Identify gaps in federal and state statutory and case law protections for privacy and recommend policies or legislation to remedy.
- Directly support the federal mandate for "Expanding Use of UAS in the Arctic" (in Sec 332(d) of Public Law 112-95).
- Design experiments and provide data to support American Society for Testing and Materials (ASTM) F38 and Radio Technical Commission for Aeronautics Special Committee (RTCA SC) 203 to evaluate minimum training and operator qualification standards for crew licensing.[14]

UAF Center for Unmanned Aircraft Systems Integration, RT&D

UAF has been involved in UAS missions for more than 10 years. It has participated in research and data gathering operations from Prudhoe Bay to South Africa.

The Alaska Legislature indicated its support in the University's efforts by passage of HCR6 in the 2013 session. The resolution identified many of the good uses of UAS in Alaska and established this task force to recommend statutory changes.

3.3.3 Expedited Timeline for Test Range Use and Approved Missions

Currently, approved UAS missions (flights) require approval by the FAA through the COA process. This process requires the entity interested in operating UAS to complete a detailed flight plan and aircraft approval. This process takes approximately 6 months from application to flight.

Now that Alaska has been selected as a test site, specific areas of the state are expected to be pre-approved for flight testing, thus eliminating the extensive application process through the FAA. The University Center for Unmanned Aircraft Systems Integration RT&D will authorize and schedule UAS flights in the test ranges and other areas with expedited approval.

3.3.4 Encourage Pilot Training Program for UAS

One hurdle that aircraft manufacturers and pilots are experiencing is that while specific training is a requirement to fly a UAS, there is no UAS flight training program approved by the FAA. Alaska would like to lead the nation and become a training center for interested UAS pilots and crew.

The LTFUAS recognizes this as an opportunity for our state University in pilot training and as an economic benefit in the state. In addition, it will keep the University in league with other U.S. universities that are developing pilot training programs.

3.3.5 Education—Public Awareness

The LTFUAS discussed that each entity that would be using a UAS would also be responsible to educate the public on the purpose of the mission as well as provide contact information of a person who would be able to respond to inquiries.

[14] Ibid.

The LTFUAS also felt that some of the public awareness would be provided through the extended duties of the LTFUAS as they deliberate the issues surrounding UAS flights in Alaska.

3.3.6 Market Alaska "Open for Business" for UAS

The Department of Commerce, Community, and Economic Development is partnering with the Fairbanks Economic Development Council to prepare an education booth for Alaska at the next AUVSI convention in Florida in May 2014.

Now that Alaska has been selected as a test site, many manufacturers and associated businesses will seek out the University to begin using test ranges and conduct business in and around the state. If fact, at least one UAS services business has already indicated an intent to open an office here in Alaska.

3.3.7 Benefits to the Public Safety Statewide

- UAS do not require a pilot on board to operate the aircraft or attached equipment. UAS operators and system operators remain safely on the ground, reducing their exposure to threats.
- UAS are able to enter environments that may be hazardous to pilots of manned aircraft.
- UAS provide superior situational awareness while minimizing the danger to which operators are exposed.
- UAS and trained operators minimize response time to most emergency situations.
- Community safety is enhanced by the rapid response of air assets to an emergency. In most cases, manned aircraft must take off and land at airports where UAS can launch from nearly anywhere within minutes.

3.4 Audits of Missions

FAA Privacy Policy requires the test site to report a variety of data on the flights occurring in the test ranges.

At this time, the LTFUAS does not believe there should be an additional requirement for reporting other than what is required by the FAA.

3.5 Test Site Operations Manager Position

The FAA Privacy Policy requirement also requires a Chief Privacy Officer at the test site. The University is refining the duties of the Director of the Test Site to encompass all the responsibilities of managing the test ranges. This officer will be developing privacy policies to govern all activities conducted by the test site, make privacy policies publicly available, and establish a mechanism to receive and consider comments from the public. Annually, the privacy officer will review test site

operations to verify compliance with the policies and practices and share those outcomes in a public forum.

3.6 Incentive Grants

Many businesses have asked the LTFUAS if Alaska will offer any incentives to conduct business in the state. Given the reduced General Fund income to Alaska, the LTFUAS did not consider any financial incentives for potential business startups in Alaska.

The LTFUAS did discuss the advantages of being selected as a test site and the expedited administrative support for conducting UAS business in Alaska. It was agreed that the opportunity will offer many benefits to our state (see Section 3.3).

3.7 Research Appropriation to University of Alaska Fairbanks

While the LTFUAS would like to support the University financially, it was determined that funding may not be available at this time. The FAA states that no additional funding will be provided in conjunction with test site selection, but we are confident that federal funding may follow as integration into the NAS will require additional management.

4. FINAL RECOMMENDATIONS

The LTFUAS supports its recommendations to the Legislature by considering and adopting general guidelines from the following reports from the FAA:

- Guidelines for Operations of UAS (N 8900.227)
- Comprehensive Plan to Integrate UAS in National Airspace
- Final Privacy Requirements

The LTFUAS also adopted the IACP UAS Guidelines as appropriate for law enforcement in Alaska (Appendix B).

In addition to the FAA documents, the LTFUAS considered a report from Legislative Legal Services that identified Alaska's privacy laws and Constitutional protections of privacy to determine if there might be a scenario created through the use of UAS that would not be protected by existing privacy laws. The LTFUAS also recognized that because Alaska has been chosen as an FAA UAS Test Site for UAS Integration, an emphasis on management of the test ranges, economic development, and public education need immediate attention.

The LTFUAS made the following conclusions:

- It is the opinion of the LTFUAS that no additional statutory or regulatory requirements are needed for FAA-approved missions.
- It is the opinion of the LTFUAS that privacy policy is adequate through the FAA requirements for the use of UAS in the test sites.
- The LTFUAS does not intend to adopt requirements of hobbyist activities using UAS in the same manner that the FAA does not regulate model aeronautics.
- It is the opinion of the LTFUAS that the Department of Administration should review its data retention schedules with particular emphasis on law enforcement data captured inadvertently and allowing that data to be destroyed.
- It is the opinion of the LTFUAS that existing privacy laws are adequate to govern the use of unmanned aircraft
- The LTFUAS is confident in the FAA guidelines in protecting the safety of the national airspace.

Based on these findings, the final recommendations of the LTFUAS are:

- Require all state and local law enforcement entities to adopt the IACP guidelines to help ensure privacy protection for Alaskans.
- Require all law enforcement entities to first obtain a court order to use UAS over private property for criminal investigation against any person.

- Encourage use of high-visibility marking or navigational lighting on law enforcement UAS as appropriate.
- Convey a clear message to industry that Alaska is open for business to harness the beneficial uses of UAS, to encourage the growth of this economic sector, and to allow Alaska to continue to lead the nation in aviation innovation.
- Encourage private and public UAS training programs.
- Report all UAS incidents/accidents of aircraft larger than 55 pounds to the University of Alaska and/or Alaska Aviation Coordination Council.
- Extend LTFUAS until June 30, 2017, and expand the duties of the Task Force with the addition of one member representing the Alaska Department of Transportation/Public Facilities (DOT/PF) and one public member, for the following reasons:
    - During this transitional phase of growing use of UAS in Alaska, the LTFUAS should be extended to continue to monitor it and any privacy matters that may arise that are not already covered by existing law. Because Alaska currently has a strong set of privacy laws, rather than recommend prohibitions be incorporated into statute that might inhibit industry, the LTFUAS recommends it continue to review UAS operations in light of current statutes and only recommend changes in statute as necessary.
    - Because FAA will be updating and issuing new guidelines based on the work of the new FAA UAS Test Sites announced on December 30, 2013, it is necessary for the LTFUAS to continue to review FAA policies to determine their impact and whether any additional policy changes at the state level may be necessary in response.
    - With Alaska's recent selection as one of the nation's six FAA UAS Test Sites through the University of Alaska's application (in conjunction with Oregon and Hawaii), the LTFUAS will meet part of the test site's requirement as a public forum where concerns regarding privacy and data matters can be collected and evaluated.

As we move forward, and particularly in light of the fact that Alaska has been selected as an FAA test site for UAS integration, and with the extension and expansion of duties of the Task Force, the LTFUAS further recommends immediate emphasis on:

1) management of the test ranges,
2) economic development opportunities,
3) public education and public relations regarding UAS,
4) difference of model aircraft from UAS,

5) a request that each department of the State of Alaska identify a point of contact for UAS to coordinate with the LTFUAS and provide information regarding department policy and procedures to ensure accountability and privacy in regard to UAS use, and

6) a request that the Alaska Department of Administration review and update its data retention policies particularly in the area of inadvertent captured data that is not relevant to a state agency.

5. DEFINITIONS

TERMINOLOGY	DEFINITION	SOURCE
Autonomous Operations	It is generally understood that most UAS have some level of autonomy associated with its operation. Although it is possible to have a completely manual UAS, which requires a pilot-in-the-loop, the majority of UAS are autonomous to a certain degree. Only those UAS that have the capability of pilot intervention, or pilot-on-the-loop, shall be allowed in the NAS outside of Restricted, Prohibited, or Warning areas. UAS that are designed to be completely autonomous, with no capability of pilot intervention, are not authorized in the national airspace system. Although the pilot may be technically considered out-of-the-loop in a lost link scenario, this restriction does not apply to UAS operating under lost link.	1
Certificate of Waiver or Authorization (COA)	An FAA grant of approval for a specific flight operation. The authorization to operate a UAS in the National Airspace System as a public aircraft outside of Restricted, Warning, or Prohibited areas approved for aviation activities.	2
Civil Aircraft	Aircraft other than public aircraft.	2
Crewmember [UAS]	In addition to the crewmembers identified in 14 CFR Part 1, a UAS flightcrew member includes pilots, sensor/payload operators, and visual observers, but may include other persons as appropriate or required to ensure safe operation of the aircraft.	2
Detect and Avoid	Term used instead of Sense and Avoid in the Terms of Reference for RTCA Special Committee 228. This new term has not been defined by RTCA and may be considered to have the same definition as Sense and Avoid when used in this document.	2
International Civil Aviation Organization (ICAO)	A specialized agency of the United Nations whose objective is to develop the principles and techniques of international air navigation and to foster planning and development of international civil air transport.	2
Manned Aircraft	Aircraft piloted by a human onboard.	2
Model Aircraft	An unmanned aircraft that is capable of sustained flight in the atmosphere; flown within visual line-of-sight of the person operating the aircraft and flown for hobby or recreational purposes.	2
National Airspace System	The common network of U.S. airspace; air navigation facilities, equipment and services, airports or landing areas; aeronautical charts, information and services; rules, regulations and procedures, technical information, and manpower and material. Included are system components shared jointly with the military.	2
Personal Information Privacy Act (PIPA)	An Act relating to breaches of security involving personal information, credit report and credit score security freezes, protection of social security numbers, care of records, disposal of records, identity theft, credit cards, and debit cards, disclosure of the names and addresses of permanent fund dividend applicants, and to the jurisdiction of the office of administrative hearings; amending Rules 60 and 82, Alaska Rules of Civil Procedure; and providing for an effective date.	3

TERMINOLOGY	DEFINITION	SOURCE
Pilot-in-Command	Pilot-in-command means the person who: 1) has final authority and responsibility for the operation and safety of the flight; 2) has been designated as pilot-in-command before or during the flight; and 3) holds the appropriate category, class, and type rating, if appropriate, for the conduct of the flight.	2
Public Aircraft	An aircraft operated by a governmental entity (including federal, state, or local governments, and the U.S. Department of Defense and its military branches) for certain purposes as described in 49 U.S.C. §§ 40102(a)(41) and 40125. Public aircraft status is determined on an operation by operation basis. See 14 CFR Part 1, § 1.1 for a complete definition of a public aircraft.	2
Sense and Avoid	The capability of a UAS to remain well clear from and avoid collisions with other airborne traffic. Sense and Avoid provides the functions of self-separation and collision avoidance to establish an analogous capability to "see and avoid" required by manned aircraft.	2
Test Range	A defined geographic area where research and development are conducted in accordance with Sections 332 and 334 of the FMRA. Test ranges are also known as test sites in related documents such as the FAA's Screening Information Request.	2
Unmanned Aircraft	1) A device used or intended to be used for flight in the air that has no onboard pilot. This devise excludes missiles, weapons, or exploding warheads, but includes all classes of airplanes, helicopters, airships, and powered-lift aircraft without an onboard pilot. UA do not include traditional balloons (see 14 CFR Part 101), rockets, tethered aircraft and unpowered gliders. 2) An aircraft that is operated without the possibility of direct human intervention from within or on the aircraft.	2
Unmanned Aircraft System	An unmanned aircraft and its associated elements related to safe operations, which may include control stations (ground, ship, or air-based), control links, support equipment, payloads, flight termination systems, and launch/recovery equipment. An unmanned aircraft and associated elements (including communications links and the components that control the unmanned aircraft) that are required for the pilot-in-command to operate safely and efficiently in the national airspace system.	2
Visual Line-of-Sight	Unaided (corrective lenses and/or sunglasses exempted) visual contact between a pilot-in-command or a visual observer and a UAS sufficient to maintain safe operational control of the aircraft, know its location, and be able to scan the airspace in which it is operating to see and avoid other air traffic or objects aloft or on the ground.	2

Sources:

1. Interim Operational Approval Guidance 08-01. Aviation Safety Unmanned Aircraft Program Office Air-160. Unmanned Aircraft Systems Operations in the U. S. National Airspace System, March 13, 2008. Federal Aviation Administration.
2. Integration of Civil Unmanned Aircraft Systems (UAS) in the National Airspace System (NAS) Roadmap. First Edition–2013. U.S. Department of Transportation Federal Aviation Administration.
3. Chapter 92 SLA 08 (HB65) .

CITY OF FAIRBANKS

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February 10, 2014

Honorable Representative Shelley Hughes
State of Alaska-House of Representatives
State Capitol, Room 409
Juneau AK 99801

Re: Support for HB 255 Unmanned Aircraft Systems Test Site

Dear Representative Hughes:

The City of Fairbanks supports military and related research operations in Interior Alaska, and particularly the proposed University of Alaska Unmanned Aircraft Systems (UAS) operations training program.

The Joint Pacific Alaska Range Complex, south of our community, is a premiere environment for military training and provides the largest restricted airspace in the United States. Fort Wainwright is also part of the City of Fairbanks and we embrace the Air Force members from Eielson Air Force Base. **We are a military community** and we support industries that provide research and tools for the military forces.

The addition of the operations training program under the University of Alaska is a feasible plan and an investment in our future. Our community is ideal due to our access to aircraft training sites and housing and amenities for personnel.

Thank you for creating this opportunity for the people of the Interior.

Yours sincerely,

Mayor John Eberhart

cc: City Council Members