

# FAA Unmanned Aircraft Systems Test Sites

April 1, 2014

The Federal Aviation Administration (FAA) Modernization and Reform Act of 2012, Public Law 112-95, directed the FAA, in coordination with the National Aeronautics and Space Administration and the U.S. Department of Defense, to develop test sites to research and test for safe integration of unmanned aircraft systems (UAS) into the national airspace system. On December 30, 2013, the FAA announced the six test site operators it selected to conduct the research and tests to inform the development of the certification and operational requirements needed to safely integrate UAS into the national airspace.

The six successful test site applicants were the University of Alaska, the State of Nevada, New York's Griffiss International Airport, the North Dakota Department of Commerce, Texas A&M University - Corpus Christi, and the Virginia Polytechnic Institute and State University (Virginia Tech).

While the FAA is working with the test site operators to define each site's operations, the FAA's goal for the test site operators is to address six research areas, including (1) system safety and data gathering; (2) aircraft certification; (3) command and control link issues; (4) control station layout and certification; (5) ground and airborne sense-and-avoid; and (6) environmental impacts. The FAA expects at least one of the operators to begin test operations in mid-2014. The site operators may continue the testing until February 13, 2017.

All of the test sites will permit access to entities interested in using the site. Each of the test site operators will develop processes for industry to utilize the test sites.

## Practice Areas

Uncrewed Aircraft Systems (UAS)

Below please find program-specific information for each of the test site operators:

### **University of Alaska**

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**Research Plan:** Alaska will develop (1) a set of standards for unmanned aircraft categories, state monitoring, and navigation; and (2) work on safety standards for UAS operations.

**Location:** The Alaska Center for Unmanned Aircraft Systems Integration will direct the Pan-Pacific UAS Test Range Complex. Alaska will utilize test site range locations in seven climatic zones, including in Hawaii and Oregon.

### **State of Nevada**

**Point of Contact:**

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Governor's Office of Economic Development  
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**Website:** <http://nias-uas.com>

**Research Plan:** Nevada will focus on: (1) UAS standards and operations and operator standards and certification requirements; and (2) how air traffic control procedures will evolve with the introduction of UAS into the civil environment and how these aircraft will be integrated with the FAA's Next Generation Air

Transportation System (NextGen).

**Location:** The Nevada Institute for Autonomous Systems (NIAS) will oversee the operation of the four test sites. The Nevada testing sites are: Fallon Municipal Airport, Boulder City Municipal Airport, Desert Rock Airport, and Stead Airport.

### **New York's Griffiss International Airport**

**Point of Contact:**

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**Research Plan:** The Northeast UAS Airspace Integration Research Alliance (NUAIR) will operate the test sites, and will: (1) develop test and evaluation as well as verification and validation processes under FAA safety oversight; (2) focus its research on sense and avoid capabilities for UAS; and (3) research integrating UAS into the congested, northeast airspace.

**Location:** NUAIR will operate the test sites at the Griffiss International Airport in Rome, New York, and at Joint Base Cape Cod in Massachusetts.

### **North Dakota Department of Commerce**

**Point of Contact:**

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**Research Plan:** North Dakota will: (1) develop UAS airworthiness essential data and validate high reliability link technology; and (2) conduct human factors research.

**Location:** North Dakota will establish the test site in Grand Forks County, ND.

### **Texas A&M University Corpus Christi**

**Point of Contact:**

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**Research Plan:** The University will develop system safety requirements for UAS vehicles and operations with a goal of developing protocols and procedures for airworthiness testing. The University plans to expand research on new applications and safe integration of unmanned aerial technology into the national airspace. One of the main research goals is finding the safest methods for unmanned planes to sense other aircraft and take measures to avoid collisions.

**Location:** The University's UAS Command and Control Center at the Coastal Bend Business Innovation Center in Corpus Christi will manage 11 Texas test ranges.

### **Virginia Polytechnic Institute and State University (Virginia Tech)**

**Point of Contact:**

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**Website:** Website under development

**Research Plan:** Virginia Tech, which is also engaged with the Universities of Maryland, Virginia, and Rutgers, will: (1) conduct UAS failure mode testing; and (2) identify and evaluate operational and technical risks areas.

**Location:** Virginia Tech plans multiple locations, subject to approval by the FAA, in largely unpopulated areas, with proximity to research and development strongholds, access to agricultural areas and to areas with significant infrastructure.