

FAA-designated State of Nevada UAS Test Site

Nevada Institute for Autonomous Systems (NIAS)



EXHIBIT D Senate Committee on Revenue and
Economic Development
Date: 4-9-2018
Exhibit begins with: D1

Total pages: 9
thru: D9

S.B. 421

NIAS Overview and FAA-designation



As Nevada's designated agency to manage the FAA Unmanned Aircraft Systems (UAS) Test Site, the Nevada Institute for Autonomous Systems (NIAS) positions Nevada as the global leader in Autonomous Systems (AS) deployment. NIAS is the synergist, clearinghouse, and learning accelerator establishing the premier smart ecosystem for Autonomous Systems which grows the AS Industry while safely integrating AS into the daily lives of the public.

City Offices Established: 3
Las Vegas & Reno

Drone Operation Centers Established: 2

UAS Test Site Resources Operators: 10

Nevada UAS Test Sites: 8

Nevada COAs Awarded: 8

NIAS Aircraft Fleet Maintained: 30

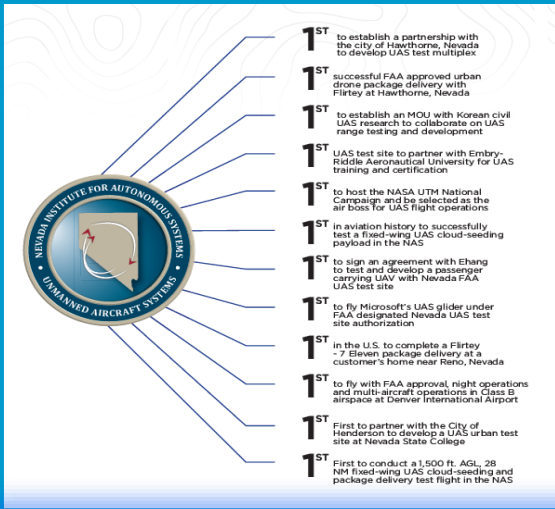
UAS Flight Missions: +1444

State of Nevada UAS Test Site FAA Designation. Congress passed and the President signed the "FAA Modernization and Reform Act of 2012"(FMRA), which contained specific requirements related to the development of UAS Test Sites. The FAA designation gives the State of Nevada the authority to conduct research, testing, and provide for verification of the safety of UAS and related navigational procedures to safely integrate public and civil unmanned aircraft systems (UAS) into the National Airspace System (NAS).

National & Global Nevada Firsts



**Business Industry
reports Nevada is #2 in
the Nation
in the Unmanned
Aerial Systems for
2018**



NIAS LEADS MAJOR TESTS

NASA UTM TCL 1 – 2015

NASA UTM TCL 2 – 2016

NASA NTL CAMPAIGN '16

NASA UTM TCL 2+ - 2017

NASA NTL CAMPAIGN 17'

FAA'S PATHFINDER 4 - 2017

NASA UTM TCL 3 – 2018

NASA UTM TCL 4 – 2019

FAA UAS Pilot Program - 2019

**First UAS Package Delivery to
Reno Residential Area**

First UAS Cloud Seeding Project

**First 97+ Mile UAS Package Delivery to Austin, TX Using
Cellular Communications**

**Led the First FAA Drone Detection Pathfinder
at Denver Int. Airport in Class B Airspace**
At night, in snow, and flying multi-aircraft operations

Missions Conducted in California, Washington, Texas, Colorado, and Florida

Current and Future Nevada UAS Test Site Activities



NASA UAS Traffic Management Technical Capability Four Operation. May – August 2019 – 36 Partners. NIAS won for the State of Nevada.



FAA UAS Traffic Management Pilot Program. July – August 2019 – 33 Partners. NIAS won for the State of Nevada.



NASA Urban Air Mobility Grand Challenge – April/May 2019. NIAS is building the first City of Reno Non LOS Drone Smart Eco-System to grow air commerce (5-year unfunded program). NIAS will need to find sponsors.

Nevada Resort Corridor/RTAA & McCarran Drone Incursion Mitigation Proposal to solve the #1 FAA problem and the biggest drone problem in Nevada - Mitigating Drone Incursions in the Commercial Air Traffic System and increasing awareness to prevent the first air disaster involving a drone (3-year program – unfunded).

NIAS has proposals for Las Vegas and Reno Infrastructure Projects to advance Air Commerce

NIAS in Warsaw, Poland with JSW SA

24 August 2018, Letter of Intent Signing



JSW SA President of the
Management Board Daniel Ozon
& NIAS Executive Director
Dr. Chris Walach

NIAS in Alberta

with Alberta Economic
Development & GOED

16 November 2018, Aerium Agreement Signing



Chris Walach, NIAS Executive
Director NIAS, AERIUM Analytics,
Hon. Shaye Anderson, Minister of
Municipal Affairs, Alberta; **Hon.**
James Ohrenshall, Senator,
Nevada State Senate District 21

Other Country Interactions:
Israel, Ghana, India, & Australia

FAA-designated

UAS Test Site Resource Comparisons



New York UAS Test Site. \$30 million investment.

September 24, 2018 -

Governor Andrew M. Cuomo recently announced that New York's ongoing investment in the growing Unmanned Aircraft Systems industry in Central New York and the Mohawk Valley is expected to create at least 200 local jobs and \$39.5 million in private investments. This announcement was following the state's \$30 million investment to support and develop the nation's first-of-its-kind 50-mile flight traffic management system.



North Dakota UAS Test Site. \$30 million investment.

December 2018-

North Dakota Governor Proposes \$30 Million for UAS Infrastructure - The proposal is part of the governor's executive budget recommendation for the 2019-21 biennium, submitted to the state legislature.



VT UAS Test Site. \$6 million investment. August 2018.

US Senator Mark Warner has introduced an amendment to Virginia's "minibus" spending package, essentially doubling the state's funding for drone systems **from \$3 million to \$6 million**, in an effort to bolster the region's involvement in the UAS Integration Pilot Program.



Nevada UAS Test Site. 2019-2021 \$170,000 investment.

Annual operating requirement with a staff of five is \$800K with no increase in personnel. **Required increase to \$1.7 million a year with no infrastructure investment.**



Deseret UAS (not a FAA UAS Test Site). \$1.8 million

2018-2020 to grow their unmanned industry.



Ohio "Sense and Avoid" Test Site. 2018-2019 Fiscal Year. \$5 million project.



SOAR Oregon, \$1.327 million (not a FAA UAS Test Site).

7 June 2017 - a statewide nonprofit that fosters growth in the state's unmanned aircraft systems (UAS) industry -

Non-FAA UAS Test Sites (State Contributions)

What NV needs the Money For



Operate the State of Nevada UAS Test Site to grow NV Infrastructure and Attract new Business

Critical Funding Needs (without Infrastructure)

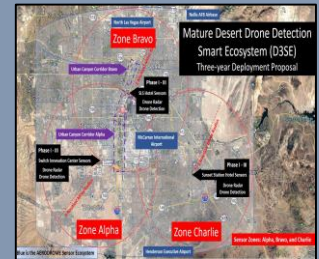
State of Nevada FAA-designated UAS Test Site
2018-2019 Year Expenses = \$850,000
(at critical personnel shortage level)

State of Nevada FAA-designated UAS Test Site
2019-2020 Year Expenses = \$1,700,000
Two-year budget = \$3,400,000
(at required level to run the UAS Test Site FAA Contract & Grow the Nevada UAS Industry)

Bottom Line: Still a small budget compared to all other FAA-designated State UAS Test Sites and other non-FAA State-funded UAS Test Sites

2018 FAA Reauthorization Act Extended all FAA-designated UAS Test Site till 30 Sept. 2023

Build State of Nevada Safe Drone Infrastructure



Critical Funding Needs

(with Infrastructure – Drone Incursion Mitigation Project)

State of Nevada FAA-designated UAS Test Site
2018-2019 Year Expenses = \$850,000
(at critical personnel shortage level)

State of Nevada FAA-designated UAS Test Site
2019-2020 Year Expenses = \$1,700,000
Two-year budget = \$3,400,000

With Drone Incursion Mitigation/Safety Project
\$8,856,350

Bottom Line: Still a small 2-year budget with Infrastructure compared to all other FAA-designated State UAS Test Sites and other non-FAA State-funded UAS Test Sites

2018 FAA Reauthorization Act Extended all FAA-designated UAS Test Site till 30 Sept. 2023

Businesses Attracted, Interested in, or Expanding in NV - NIAS Engagements



Poland

ILOT

APS

HAWKE

AEROBITS

1000 realities

4lifealert

Aceleron

Air.Car

BaseTrack

Born Electric

Bring!

Cervi Robotics

Dlabs

Eccocar

EUROLOOP

FlyTech

Hoverbike

Robocar Technologies

SkyTronic

Spartaqs

UAVS

United Robots

Others

DJI

Stratodynamics Aviation Inc

Easy Aerial

Alberta

SAIT

Aerium

ACAMP

CANADIAN UAV

Five years after its launch, NIAS reports that it has helped create about 200 jobs in the drone industry, and with critical Infrastructure investment, NIAS expects to help create 400 to 500 more in the next two-three years.



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