Aviation in North Carolina

Annually:
- 29.1 million total passenger enplanements
- 3.2 million total aircraft operations
- Over 1.4 billion pounds of air cargo

Pilots and Aircraft:
- 17,760 Pilots
- 6,987 Manned Aircraft
- 13,264 UAVs
**NCDOT Division of Aviation Mission**

Promote the economic well being of North Carolina through air transportation system development and improved aviation safety and education.
Division of Aviation Core Functions

Provide:

- Aviation Safety and Education Programs
- State and Federal Airport Grant Programs
- Air transportation, operations, and support for state agencies
- Management of the state’s Unmanned Aircraft System Program
Part 77 – Protect your Airports

SURFACE SLOPE KEY

CIVIL AIRPORT IMAGINARY SURFACES

SECTION A-A

TRANSPORTATION
NCDOT Aviation UAS Program Office

PROMOTE SAFE AND LEGAL UAS OPERATIONS IN NC

- Administer NC UAS Knowledge Test and Permitting as required by the General Statutes
- Maintain the state’s long-term Strategic Plan to support UAS activities
- Provide safety, guidance, and educational materials and resources
- Manage the UAS Working Group
- Support private sector growth by working with the Commerce Partnership
Hobbyist Drone Registrations

As of May 2016, FAA records show:

- 459,374 hobbyist drones registered in the United States
- 13,017 hobbyist drones registered in North Carolina

Source: FAA
Non-Hobbyist Drone Registrations

As of May 2016, FAA records show:

- 8,357 non-hobbyist drones registered in the United States
- 247 non-hobbyist drones registered in North Carolina

Source: FAA
FAA sUAS Forecasts

• FAA estimates for small, hobbyist UAS purchases may grow from 1.9 million in 2016 to as many as 4.3 million by 2020.

• Sales of UAS for commercial purposes are expected to grow from 600,000 in 2016 to 2.7 million by 2020.

• Combined total hobbyist and commercial UAS sales are expected to rise from 2.5 million in 2016 to 7 million in 2020.
The FAA recognizes that the full potential of commercial UAS operations are restrained by the existing regulatory framework.

“The overall demand for commercial UAS will soar once regulations more easily enable beyond visual line of sight (BVLOS) operations and operations of multiple UA by a single pilot.”
Interactions with Manned Aircraft

Between August 2015 and January 2016:

- 12 registered UAS sightings in North Carolina
- 583 registered UAS sightings in the United States


Photo Source: Flickr
Construction Project Monitoring
Construction Project Monitoring
FEDERAL
Airspace is sole sovereignty of federal government

NORTH CAROLINA
NC General Statutes
FAA’s Role - Regulate the Airspace

49 U.S.C. United States Code - Title 49 - §40103. ....
(1) The United States Government has exclusive sovereignty of airspace of the United States.
New FAA small UAS rule

• FAR Part 107 “Small UAS Rule”, Effective: August 29, 2016

• Major Provisions:
  • Small UAS is between .55lbs and 55lbs
  • Operators must have a Remote Pilot’s Certificate from the FAA or else operate the drone under the supervision of someone who has obtained the certificate.
    ▪ Certificates valid for 2 years
    ▪ Minimum age: 16
  • Operators may fly both during the day and in civil twilight;
  • Max altitude 400ft AGL, Max Speed 100 mph;
  • Operators cannot fly a drone over anyone not involved with the operation;
  • Operators must keep a drone within their line of sight while it is flying.
  • Waivers and Airspace authorizations can be requested through FAA
Legally operating a UAS

• COAs and Section 333 Exemptions not going away – still are available as a means for authorizing operations not covered under Part 107 – e.g. UAS over 55 lbs or high altitude operations.

• FAR Part 107 Remote Pilot Certificate
  • New pilots must pass a FAA Aeronautical Knowledge Test administered by FAA-approved Flight Testing Centers and pass TSA background check.
  • Or existing aircraft pilots can obtain Remote Pilot Certificate by completing an online course at https://www.faasafety.gov/, have a current flight review, and apply for the rating with FAA.
Register your Drone

- Hobbyist and non-hobbyist drones need to be registered with the FAA
- https://registermyuas.faa.gov

Do I need to register my Unmanned Aircraft?

You need to register your aircraft if it weighs between 0.55 lbs. (250 grams) and up to 55 lbs. (25 kg)

You will be subject to civil and criminal penalties if you meet the criteria to register an unmanned aircraft and do not register.
Summary of NC S.L. 2014-100 regarding UAS

Updated by passage of NC S.L. 2015-232

Changes or additions to the following:

• Chapter 14 – Criminal Law
  • §14-7.45 Crimes committed by use of UAS
  • §14.280.3 Interference with manned aircraft by UAS
  • §14.401.24 Unlawful possession and use of UAS (Weapon attached)
  • §14.401.25 Unlawful distribution of images

• Chapter 15A – Criminal Procedure
  • §15A-300.1 Restrictions on use of UAS
  • §15A-300.2 Regulation of launch and recovery sites
Summary of NC S.L. 2014-100 regarding UAS

Updated by passage of NC S.L. 2015-232

Changes or additions to the following:

• Chapter 63 – Aeronautics
  • §63-95 Training required for operations of UAS (Knowledge Testing)
  • §63-96 Permit required for commercial operation of UAS
• Chapter 113 – Conservation and Development
  • §113-295 Unlawful harassment of persons taking wildlife resources
NC UAS Website

- Online administration of NC UAS Operators Knowledge Test
- Commercial and Government UAS Operator’s Permits can be acquired online
- UAS Safety Guide and NC Statutes
- Helpful Links

ncdot.gov/aviation/uas/
NCDOT Aviation UAS Website – One Stop Shop

Get Permit

Learn
Different types of UAS operations

Take the Test

Help
Access FAQs, Fact Sheets, NC Statues

UAS Operator Permits
A permit is required for commercial & government drone operations in North Carolina. Passing the UAS Knowledge Test is a requirement for obtaining a permit.

Start Permitting Process

Do you know the requirements to fly a drone in North Carolina?
Flying safely is the responsibility of every UAS operator. Download the Study Guide and learn all the rules & regulations in North Carolina.

Download Study Guide
Start Knowledge Test

Types of UAS Operation
Detailed information, guidelines and restrictions for drone pilots.

Commercial
Government Operations
Recreational
NC UAS Operators Knowledge Test

- Required in addition to the FAA Remote Pilot Certificate test. The NC test focuses on NC specific laws.
- Ensures understanding of NC laws related to UAS Operations
- Download Study Guide, Take test and receive score immediately
- 25 questions, randomly selected from a 71 potential questions
- All UAS operators encouraged to take it
- Commercial and Government UAS Operators Required to Pass
Operator Permits

Commercial and Government
Operator Permits/Credentials
Printed directly from website

NC UAS Operator Permits valid for 2 years from issuance
Consistent with FAA-issued Part 107 Remote Pilot Certificate

Ts&Cs on Reverse
**NC UAS Permits Issued**

As of Nov. 1: 162 Government Permits, 351 Commercial Permits, 513 Total
Insurance - Commercial

UAS Owner/Operator should have insurance coverage for their operations
- Not required by Federal or State law
- Do not assume you are covered under blanket policy
- Make sure insurance coverage has language that specifically states Unmanned Aircraft Systems, Unmanned Aircraft Vehicle, or similar

✓ This is a quick check when hiring a company to provide UAS services for you
Insurance - Government

UAS Owner/Operator should have coverage
  • Do not assume you are covered under blanket policy
  • Not required by Federal or State law
  • Make sure insurance coverage has language that specifically states Unmanned Aircraft Systems, Unmanned Aircraft Vehicle, or similar

• State Agencies
  • Insurance coverage goes through NC Dept. of Insurance
  • Contact Lisa Weatherly - 1-888-275-8906 lweatherly@lianc.com

• NC League of Municipalities
  • Contact David Ludwig, Rick Management (interim until January 2017) 919-715-2900

• NC Association of County Commissioners
  • Contact Michael Kelly, Risk Management Director – 919-719-1124
NC Government UAS Checklist

✓ FAA Authorization – Must obtain:
  • Remote Pilot Certificate (under Part 107)
  • Or hold a COA or 333 exemption

✓ FAA UAS Registration
  • All UAS/Drones under 55lbs and above .55lbs

✓ NC Knowledge Test
  • Take and pass the test on the NCDOT Division of Aviation website

✓ NC Government Operators Permit
  • Once you have passed your NC UAS Knowledge Test, you may obtain a permit
  • No fee charged at this time

✓ Insurance
  • Not required by federal or state law
  • Best Practice to have
NC Commercial UAS Checklist

✓ FAA Authorization – Must obtain:
  • Remote Pilot Certificate (under Part 107)
  • Or hold a COA or 333 exemption

✓ FAA UAS Registration
  • All UAS/Drones under 55lbs and above .55lbs

✓ NC Knowledge Test
  • Take and pass the test on the NCDOT Division of Aviation website

✓ NC Commercial Operators Permit
  • Once you have passed your NC UAS Knowledge Test, you may obtain a permit
  • Need to have an airman certificate to complete the process
  • No fee charged at this time

✓ Insurance
  • Not required by federal or state law
  • Best Practice
Holiday Checklist – New Drone Owner

If the UAS/drone is for hobbyist use, you must:
✓ Register your UAS/drone with the FAA online
✓ Operate within the hobbyist rules
Recommended:
✓ Take the NC UAS Knowledge Test
Discussion

Basil Yap
NCDOT – UAS Project Manager

UAS@ncdot.gov

www.ncdot.gov/aviation/