



# **Study Guide for North Carolina Unmanned Aircraft Systems (UAS) Operator's Knowledge Test**

*Published by the North Carolina Department of Transportation Division of Aviation in conjunction with the NC UAS Operators Knowledge Test and North Carolina UAS Operator Permitting System to ensure that UAS operators in North Carolina understand and comply with state laws related to UAS use.*

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# FOREWORD

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Completing the North Carolina UAS Operator’s Knowledge Test offers you the opportunity to become a pioneer in commercial and/or government operations of unmanned aircraft systems (UAS). You will have the ability to carry out tasks recently thought impossible and help set the standard of safety and excellence in an emerging field.

The conversation around UAS operation continues to develop in the United States. Many states have yet to pass legislation regarding unmanned aircraft, and laws that are passed must evolve as the field grows and changes. Some aspects of unmanned flight are controversial, and will remain so. The N.C. Department of Transportation is working to provide unbiased guidance and support as people in North Carolina navigate this dynamic and exciting field. This framework will help UAS users operate their technology in a manner that complies with federal and state laws, setting a standard for responsible use for the rest of the country.

As an unmanned aircraft operator, you are responsible for the safety of those around you, both on the ground and in the air. By following the laws and regulations – set by the Federal Aviation Administration and the North Carolina General Assembly – found in this handbook, you will help keep our airspace safe and enjoy a productive and fun UAS experience.

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# Important Acronyms and Abbreviations

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COA	Certificate of Waiver or Authorization
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
Knowledge Test	North Carolina UAS Operators Knowledge Test
NAS	National Airspace System
NC	North Carolina
NCDOT	North Carolina Department of Transportation
NCDOT/DOA	North Carolina Department of Transportation Division of Aviation
NCGS	North Carolina General Statutes
NOTAM	Notice to Airmen
NPRM	Notice of Proposed Rulemaking
Section 333	Refers to Section 333 of the FAA Modernization and Reform Act of 2012, which grants the U.S. Secretary of Transportation the authority to issue waivers to allow legal commercial operation of UAS in the National Airspace System.
TFR	Temporary Flight Restriction
UAS	Unmanned Aircraft System, also known as a “drone”
U.S.	United States

# **1 BACKGROUND AND PURPOSE OF THE NORTH CAROLINA UAS OPERATOR'S KNOWLEDGE TEST AND STUDY GUIDE**

In 2014, the North Carolina General Assembly passed a bill establishing regulations for the use of unmanned aircraft systems (UAS) within the state. These regulations were enacted in anticipation of the continued expansion of UAS use for recreational purposes as well as government and commercial applications, both of which have the potential to provide significant economic, safety, and environmental benefits to a wide variety of industries, government functions, and the general public.

As part of these regulations, additions to North Carolina General Statutes (NCGS) 63-95 and 63-96 were enacted assigning responsibility to the N.C. Department of Transportation Division of Aviation (NCDOT/DOA) for the development and administration of a UAS Knowledge Test, as well as a permitting system, to ensure that UAS operators understand and comply with North Carolina laws.

North Carolina's UAS regulations are not intended to duplicate federal regulation, nor is the NCDOT/DOA attempting to assume the role of the Federal Aviation Administration (FAA) in regulating the use of airspace in the United States. Regulatory authority over U.S. airspace resides solely with the FAA. The FAA is responsible for establishing requirements to obtain authorization for UAS operations and for granting authorization to operate in the airspace, as well as establishing and administering standards, training, and testing requirements for UAS operators.

North Carolina's UAS regulations establish the types of UAS activities allowed in North Carolina and govern the use of UAS technology in the state to facilitate allow the benefits associated with the technology to be realized while protecting the safety and privacy of people in the state. In turn, the Knowledge Test was created to ensure that UAS operators in North Carolina fully understand the state laws governing this technology.

This guide was prepared to help potential UAS operators prepare for the Knowledge Test and provide an overview of the North Carolina laws related to UAS use. This guide is not intended to provide a comprehensive airspace education or to serve as a guidebook for Federal Aviation Regulations (FARs); nor is it intended to teach prospective operators how to use a UAS.

By studying this guide, prospective operators will learn about the UAS-related laws in North Carolina and the requirements that must be met in order to legally operate UAS within the state. In addition, this guide provides prospective operators with helpful information related to obtaining the necessary federal and state authorizations for UAS operation.

Finally, while every attempt has been made to ensure that this guide contains the information necessary to understand North Carolina's UAS regulations, prospective operators are also encouraged to read the specific NCGS related to UAS to ensure that they have a complete understanding of the law. References to where the statutes can be viewed online are given at the end of this guide.

## **2 REGULATORY AUTHORITY: WHO GOVERNS WHAT?**

### **2.1 THE FEDERAL AVIATION ADMINISTRATION**

For years, the general public had little reason to be concerned with airspace issues. There was a general understanding that all manned flight had established methods of training and certification. In the same regard, hobbyists could buy and build model aircraft kits and receive guidance from hobby shops or other operators.

Now, new technology is rapidly becoming more accessible to commercial and private operators. Small and sophisticated unmanned aircraft are increasingly affordable, and the general public is becoming more aware of aviation safety and privacy issues. Unfortunately, many people are unaware that the FAA governs all of the nation's airspace, even the airspace above their property. Without rules from the FAA governing the use of all airspace, the increased use of the airspace resulting from the increasing number of UAS operations would be unsafe and endanger manned flight.

The FAA has exclusive sovereignty over airspace in the U.S. (49 U.S Code). The FAA establishes operating rules governing the airspace in the form of Federal Aviation Regulations (FARs). These regulations govern all aspects of aviation, such as pilot and aircraft certification requirements. **It is important to note that, per federal law, unmanned aircraft are still considered aircraft, and therefore are subject to the FARs administered by the FAA.**

Congress has authorized the FAA to safely integrate UAS into the National Airspace System (NAS) using the authority of the FAA Modernization and Reform Act of 2012. In 2015, the FAA published a Notice of Proposed Rulemaking (NPRM) outlining the first FARs governing small UAS (those weighing less than 55 pounds). In addition, FAA Flight Standards Field Offices have been provided internal guidance for UAS rule implementation and enforcement. It is important to note however that while this NPRM outlined the FAA's **proposed** rule for small UAS, that rule has not yet been enacted and as such, **existing** enacted FARs apply.

Prior to establishing any UAS-specific rules, the FAA has the authority to enforce existing regulations, such as those related to careless and reckless operation of aircraft. These rules can also be applied to a UAS hobbyist if safety of a manned flight or the airspace in general is in question. The FAA is making significant progress in integrating UAS activities as an established sector in the aviation community.

### **2.2 THE STATE OF NORTH CAROLINA**

The State of North Carolina is responsible for ensuring those operating UAS understand and follow state laws. This allows operators to enjoy the benefits associated with various UAS applications while also protecting the safety and privacy of North Carolina's citizens and visitors. This is accomplished by specific State Statutes (NCGS).

#### **2.2.1 The North Carolina Department of Transportation Division of Aviation**

NCDOT/DOA is responsible for regulating all government (public) and commercial UAS operations in the state concerning:

- Implementing the Knowledge Test

- Issuing NC commercial and governmental UAS operator permits
- Serving as the primary point of contact for all state-related UAS issues

The Division of Aviation is not responsible for:

- Granting airspace use authorizations
- UAS pilot certification
- FAA commercial licensing
- UAS airworthiness standards
- Airspace issues

### **2.3 OTHERS – LOCAL GOVERNMENTS AND NATIONAL PARKS**

In addition to the regulatory authority of the FAA and the State of North Carolina, prospective operators should be aware that:

- Local governments may also adopt ordinances concerning UAS launch and recovery.
- Certain national parks, including some in North Carolina, prohibit UAS flights except as approved in writing by the park superintendent.

### **2.4 INDOOR FLIGHT**

Indoor flight is not governed by the FAA. Indoor flight is defined as flight occurring inside an enclosed space where the enclosure can be reasonably expected to prevent the flying platform from exiting the enclosure while in flight. Indoor UAS operations are the responsibility of the building owner; however, those flights and any imagery collected as a result of those flights are still subject to the North Carolina law.

## **3 WHO SHOULD TAKE THE NORTH CAROLINA UAS KNOWLEDGE TEST?**

**Anyone planning to use a UAS in North Carolina for any purpose other than recreation must pass the Knowledge Test prior to operating a UAS in the state.** This requirement applies regardless of UAS type and what, if any, type of cameras or sensors the UAS is equipped with.

The only exception to this requirement is for individuals operating a UAS under the authority of a federal agency (either a federally owned-and-operated UAS or a UAS being operated under contract to a federal agency). An example of this would be official UAS operations conducted by U.S. Army personnel or contractors at Fort Bragg, N.C.

Operators who do not meet the above criteria for the exception must determine into which category they best fit. The FAA and the State of North Carolina recognize three distinct categories of UAS operations:

1. Recreational Operations (model aircraft operations)
2. Government Operations (public aircraft operations)
3. Commercial Operations (civil aircraft operations)

### **Definitions in the State Statute (NCGS 15A-300.1)**

- (1) Model aircraft – An aircraft, as defined in G.S. 63-1, that is mechanically driven or launched into flight and that meets all of the following requirements:
  - a. Is flown solely for hobby or recreational purposes.
  - b. Is not used for payment, consideration, gratuity, or benefit, directly or indirectly charged, demanded, received, or collected, by any person for the use of the aircraft or any photographic or video image produced by the aircraft.
- (2) Unmanned aircraft – An aircraft, as defined in G.S. 63-1, that is operated without the possibility of human intervention from within or on the aircraft and that does not meet the definition of model aircraft.
- (3) Unmanned aircraft system – An unmanned aircraft and associated elements, including communication links and components that control the unmanned aircraft that are required for the pilot in command to operate safely and efficiently in the national airspace system.

### **Business or Pleasure?**

- Federal statutes require model aircraft to be flown strictly for hobby or recreational purposes. According to the FAA, commercial flights or flights that promote a business purpose do not qualify as recreational flights.
- NCGS 15A-300.1 (a) (1) reinforces the idea that the determination between commercial and recreational flights depends on the flight's purpose and results, not the type of aircraft or its capabilities.
- Therefore, UAS operations conducted for any purpose other than recreation are subject to both FAA and North Carolina regulations regarding non-recreational UAS flights.
- For example, if someone flies a UAS for fun and in the process takes a picture that later is sold or used to promote a business or product, the flight would be defined as commercial, even though the original intent of the flight was recreation. Regulators cannot definitively determine intent – they can only look at results.

### **Government Operations (public aircraft operations)**

- Government operations are limited by federal statute to certain operations within U.S. airspace. The considerations for this determination are aircraft ownership, operator, and flight purpose.
- Public agencies – or individuals who represent a government organization within the state – that operate UAS for a public (government) purpose are subject to federal and North Carolina regulations.
- Public agencies include any agency, department, or office of the state, as well as any political subdivision of the state, including county and city governments and their subdivisions. Public agencies also include all public universities and educational institutions.

- More information on what constitutes a government operation can be found on the FAA's [website](#).

### **Commercial Operations (civil or non-government operations)**

- Any operation that does not meet the statutory criteria for a [government operation](#) is considered commercial operation and must be conducted in accordance with all FAA regulations applicable to the operation.
- UAS flights that are not conducted for a recreational or government purpose are subject to the regulatory provisions for commercial UAS operations.
- If a UAS operator receives payment or a benefit for a UAS flight, or the images or data obtained during a flight, the flight is not recreational. Payments or benefits can be direct or indirect. Anyone operating such flights must pass the Knowledge Test and obtain the correct permit.

### **Determining UAS operation type can be completed with the following questions:**

1. Is the operation purely for recreational purposes, meeting all requirements for recreational operations as explained above? If not, then ...
2. Does the operation qualify as a government operation as defined above? If not, then ...
3. The operation is considered commercial under state and federal regulations.

For more information on Model Aircraft Operations/Recreational Operations, the FAA's guidance can be found on its [website](#).

The FAA has teamed up with several organizations to promote safe model aircraft/recreational flight. The joint effort, called "Know Before You Fly," established a [website](#) to help users determine their status and understand the rules. From this site, users can find guidance from the FAA on where to conduct recreational UAS flights, altitude restrictions, etc. The key points of the FAA guidance for recreational UAS operations are:

- Never fly above 400 feet (measured from local ground level).
- Always fly within your visual line of sight.
- Do not fly within 5 miles of an airport without first coordinating with the air traffic management authority.
- Do not fly above stadiums or public events.
- Do not fly for compensation.
- Only fly UAS that weigh less than 55 pounds.
- Do not fly at night, even if the UAS is equipped with lights.
- Do take lessons or receive training before flying.

### **IMPORTANT – North Carolina Statutes Apply to ALL UAS Operations**

North Carolina laws apply to anyone conducting UAS operations in North Carolina for the following:

- Public operations, e.g., federal, state, or local government
- Commercial operations as defined by FAA
- Hobbyist or recreational UAS used for illegal activity

Recreational UAS users do not need to pass the Knowledge Test or obtain a permit, but they are not exempt from North Carolina laws regarding the use of a UAS.

#### **4 AUTHORIZATION TO FLY: WHAT DO I NEED?**

Potential government and commercial users must obtain several authorizations required by federal and state law in order to legally conduct UAS operations in North Carolina. These authorizations fall into two categories:

1. Airspace use authorizations
2. North Carolina authorizations

#### **5 AUTHORIZATION TO FLY: AIRSPACE USE AUTHORIZATION**

As previously stated, the FAA has authority over all aviation activities over domestic U.S. airspace.

- The FAA sets requirements, including any training and testing requirements related to operating any aircraft, including UAS, in the NAS to ensure that operators have the necessary knowledge, skills, procedures, and controls to ensure safe operations for all users.
- The FAA has established procedures for handling all manner of flights operating in the national airspace system (NAS).

Because the FAA’s proposed rule governing airspace use by UAS has not yet been enacted, non-recreational UAS flights are only permitted access to airspace by way of a waiver or exemption.

The FAA has two processes by which a potential UAS operator can obtain an airspace use authorization via waiver or exemption:

- **Government operators** are eligible to apply for a Public Use Certificate of Authorization (COA).
  - To apply for a Public Use COA, operators must first submit proof that they are part of a public agency before completing the FAA’s COA application system.
  - Government operators are required to register their UAS with the FAA and obtain an N-number for the UAS prior to operation.
- **Commercial operators** must apply for a Section 333 Exemption through the FAA.

- Once a Section 333 Exemption has been granted, the operator can choose to operate within the parameters of the “Section 333 Blanket Civil COA” that is provided along with their Section 333 Exemption, or they may apply for an additional Civil COA if their anticipated operations require flights to be conducted outside of the parameters of the blanket COA.
- Commercial UAS operators are required to register their UAS with the FAA and obtain an N-number for the UAS prior to operation for commercial purposes.

**5.1 GOVERNMENT ENTITIES: PUBLIC CERTIFICATES OF WAIVER OR AUTHORIZATION**

A Public Use COA is an authorization issued by the FAA’s Air Traffic Organization to a government operator for a specific UAS activity. Once an application is submitted, the FAA conducts a comprehensive operational and technical review.

FAA FORM 7711-1 UAS COA Attachment  
2013-ESA-77 Page 1 of 22

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION
<b>CERTIFICATE OF WAIVER OR AUTHORIZATION</b>
ISSUED TO North Carolina State University North Carolina State University Centennial Campus, Box 8601 Raleigh, NC 27695-8601
This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.
OPERATIONS AUTHORIZED Operation of the Condor II Unmanned Aircraft System (UAS) in Class G airspace at or below 400 feet Above Ground Level (AGL) near the Hyde County Airport (7W6) depicted in Attachment 1 under the jurisdiction of MCAS Cherry Point Approach Control.
LIST OF WAIVED REGULATIONS BY SECTION AND TITLE N/A

**Figure 1 - Government (Public) Certificate of Authorization**

The application system for a Public COA is not available to prospective operators until the FAA establishes that the applicant is a public entity. If necessary, provisions or limitations may be imposed as part of the approval to ensure the UAS can operate safely with other airspace users. The FAA has issued blanket waivers in some cases.

Prospective UAS operators should check with the FAA for the most current guidance on these applications.

**For more information on the Public Use Certificate of Authorization process, please see the FAA’s [website](#).**

**5.2 COMMERCIAL UAS OPERATORS: SECTION 333 EXEMPTIONS**

Since 2014, the FAA has allowed certain commercial UAS operations prior to issuing a final rule concerning small UAS. The FAA has issued several policies for commercial UAS operations:

- Any aircraft operating in the NAS for commercial purposes must be registered with the FAA and operated by a licensed pilot and is subject to FAA approval. Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA) grants

the Secretary of Transportation the authority to determine whether an airworthiness certificate is required for a UAS to operate safely in the NAS.

- Operational authority is granted on a case-by-case basis for certain UAS to perform commercial operations until a final ruling for small UAS is complete.
- The Section 333 Exemption process provides operators who wish to pursue safe and legal entry into the NAS a competitive advantage in the UAS marketplace, thus discouraging illegal operations and improving safety. It is anticipated that this activity will result in significant economic benefits, and the FAA Administrator has identified this as a high priority project to address demand for civil operation of UAS for commercial purposes.

**For more information on the Section 333 Exemption process and how to file an application, please refer to the FAA [website](#).**

## **6 AUTHORIZATION TO FLY: NORTH CAROLINA AUTHORIZATIONS**

Operators who have obtained the necessary FAA authorization(s) and intend to conduct government or commercial UAS operations are required to:

- Pass the Knowledge Test
- Obtain either a commercial or government UAS operator permit

NCDOT/DOA provides credentials for operators who have passed the Knowledge Test and obtained UAS operator permits.

- Users must pass the Knowledge Test before applying for a commercial or government permit. Users must choose which type of permit they wish to apply for.
- North Carolina law specifically requires permits for commercial operators and some form of credential for government operators.
  - To simplify the process and provide a consistent set of credentials that can be verified by NCDOT and/or law enforcement, permits will be issued for both commercial and government operators. Commercial operator permits are marked “Commercial” and Government operator permits are marked “Government.”
  - Per North Carolina law, operators must keep their permit, a copy of any applicable FAA-issued airspace use authorization, and a valid form of government-issued ID (such as a driver’s license), in their possession while operating a UAS operation within the state.

**Note:** Per North Carolina law, operators who have obtained the necessary authorizations from the FAA for commercial UAS operations and have been operating prior to the North Carolina UAS Operator’s Knowledge Test and permitting system becoming available, may continue conducting UAS operations within the state if they register with the state, pass the Knowledge Test, and obtain a permit from NCDOT/DOA within 60 days of the test and permitting process being implemented.

Finally, per North Carolina law, UAS operators are required to obtain permission from the owner of any property they use for launch or recovery operations. Details regarding the regulation of launch and recovery sites are covered later in this guide.

## 7 TYPES OF AIRSPACE AND FLIGHT RESTRICTIONS

Figure 2 depicts the basic types of airspace. All UAS operators should be familiar with the flight requirements in each type of airspace prior to requesting an airspace authorization from the FAA. Airspace authorization applications must include altitudes to be flown and the class of airspace impacted. The FAA provides guidance for each airspace class, as well as other types of airspace such as restricted, prohibited, and military special use airspace on their [website](#).

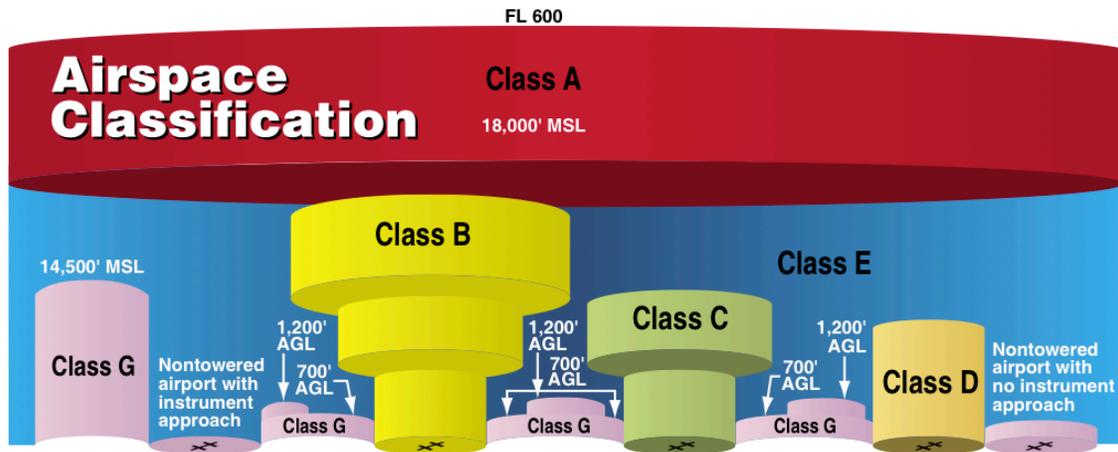


Figure 2 - Airspace Classifications

### 7.1 CLASS B, C, AND D AIRSPACE IN NORTH CAROLINA

Each class of airspace shown in the figure above can be found in North Carolina. The following figure provides some examples of where Class B, Class C, and Class D airspace can be found in North Carolina.



Figure 3 - Class B, C, and D Airspace in NC

## 7.2 AIRSPACE RESTRICTIONS

### 7.2.1 Restricted Airspace

Restricted airspaces are defined by specific areas on the earth's surface within which aircraft flight, while not wholly prohibited, is subject to limitations. Frequent low-altitude military aviation operations, including both rotary and fixed-wing aircraft operations, are conducted within this airspace daily. North Carolina contains some of the most heavily used restricted airspace in the U.S.

FAA-approved aeronautical charts provide descriptions and altitudes for information about North Carolina's restricted airspaces.

UAS operators should become familiar with the location of restricted airspace and identify contact sources for those areas in which they may wish to operate. **Permission for UAS flights in restricted airspace can ONLY be granted by the controlling agency for that particular restricted airspace area.**



Examples of Restricted Airspace

Figure 4 - Examples of Restricted Airspace in NC

### 7.2.2 Temporary Flight Restrictions

A temporary flight restriction (TFR) is a regulatory action issued by the FAA that temporarily restricts certain aircraft from operating within a defined area in order to protect persons or property in the air or on the ground. The term TFR is used generically to describe various types of restrictions within the NAS.

There are eight types of TFRs used throughout the NAS. Understanding the reasons for each TFR type helps UAS operators recognize the possibility of restrictions effecting their intended flights.

For example, Stadium TFRs are issued for sporting events. They go into effect one hour before the event and end one hour after the event and extend 3 nautical miles from the stadium to 3,000 feet above ground level. They apply to any stadium with a seating capacity of 30,000 or more people when a regular or post-season MLB, NFL, or NCAA Division One football game occurs. They also apply to NASCAR, Sprint Cup, INDY Car, and Champ Series races, excluding qualifying and pre-race events.

### EXAMPLE OF TFR

!FDC 3/0924 ZTL NC..AIRSPACE LINVILLE FALLS, NC..TEMPORARY FLIGHT RESTRICTIONS WITHIN AREA DEFINED AS:  
355500N/0815500W (HMV166 RADIAL AT 32.8NM) TO  
355500N/0815000W (HMV159 RADIAL AT 34.3NM) TO  
355000N/0815000W (HMV162 RADIAL AT 38.9NM) TO  
354735N/0815045W (HMV164 RADIAL AT 40.9NM) BACK TO THE ORIGINAL POINT SFC-5500FT. TO PROVIDE A SAFE ENVIRONMENT FOR FIRE FIGHTING. PURSUANT TO 14 CFR SECTION 91.137(A)(2) TEMPORARY FLIGHT RESTRICTIONS ARE IN EFFECT. ONLY RELIEF AIRCRAFT OPERATIONS UNDER DIRECTION OF US FOREST SERVICE ARE AUTHORIZED IN THE AIRSPACE. US FOREST SERVICE TELEPHONE 678-320-3012 OR FREQ 122.925/ TABLE ROCK FIRE IS IN CHARGE OF THE OPERATION. ATLANTA / ZTL/ ARTCC TELEPHONE 770-210-7622 IS THE FAA COORDINATION FACILITY.

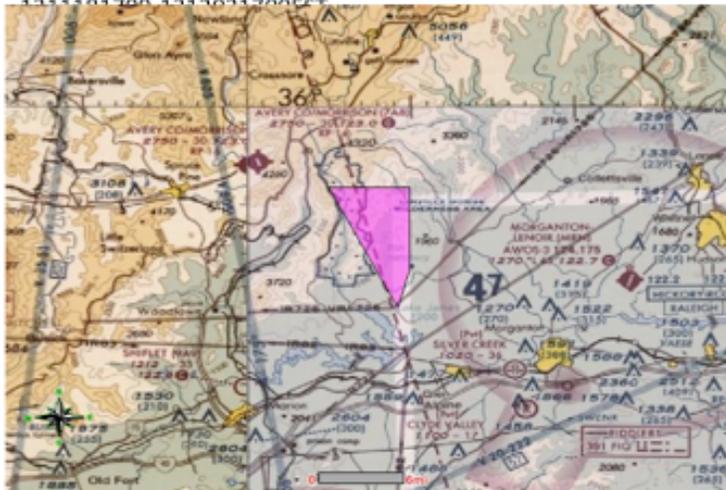


Figure 5 - Example of a Temporary Flight Restriction (TFR)

Because TFRs are dynamic, it is imperative that UAS operators check on a real-time basis for their locations. TFRs can be found in a number of places, including:

- [Online](#)
- Notice to Airmen (NOTAM)
- Through Air Traffic Control Centers (ARTCC)
- Through Air Traffic Control Facilities (ATCT)
- Flight Service Stations

## 8 NORTH CAROLINA STATUTES: WHAT CAN I DO?

### 8.1 REGULATION OF LAUNCH AND RECOVERY SITES



Since the FAA governs all aspects of airborne flight, the North Carolina General Assembly chose to allow local governments and private property owners to limit the use of UAS on their property. The law requires consent when on state or private property prior to UAS launch and recovery. However, this consent does not waive any other FAA requirements once the UAS is airborne.

Prospective operators should be aware of the following:

- Local governments may also adopt ordinances concerning UAS launch and recovery.
- Certain national parks, including some in North Carolina, prohibit UAS flights except as approved in writing by the park superintendent.

### 8.2 GENERAL PROHIBITIONS



It is illegal to operate a UAS in North Carolina to conduct surveillance of a person or a dwelling occupied by a person without the person's consent. This includes the house or dwelling and the land immediately surrounding it. It also includes the boundary within which a homeowner can have a reasonable expectation of privacy, generally up to 400 feet from the home. These limitations also extend to surveillance of private property (lands and fields) without the consent of the owner, easement holder, or property lessee.

In the case of UAS photography, consent is required from individuals when the photos will be published or otherwise publicly disseminated. This does not apply to newsgathering, newsworthy events, or events or places to which the general public is invited.

### **8.3 LAW ENFORCEMENT EXCEPTIONS**



UAS used by North Carolina law enforcement agencies of the State or a political subdivision of the state are allowed in the following instances:

1. To counter a high risk of a terrorist attack by a specific individual or organization if the Secretary of Homeland Security or the Secretary of the N.C. Department of Public Safety determines that credible intelligence indicates that the risk exists.
2. To conduct surveillance in an area that is within a law enforcement officer's plain view when the officer is in a location he or she has a legal right to be.
3. If the law enforcement agency first obtains a search warrant authorizing the use of a UAS.
4. If the law enforcement agency possesses reasonable suspicion that, under particular circumstances, swift action is needed to prevent imminent danger to life or serious damage to property, to prevent the imminent escape of a suspect or the

destruction of evidence, to pursue an escapee or suspect, or to facilitate the search for a missing person.

5. To photograph gatherings to which the general public is invited on public or private land.

#### **8.4 UNWARRANTED SURVEILLANCE**



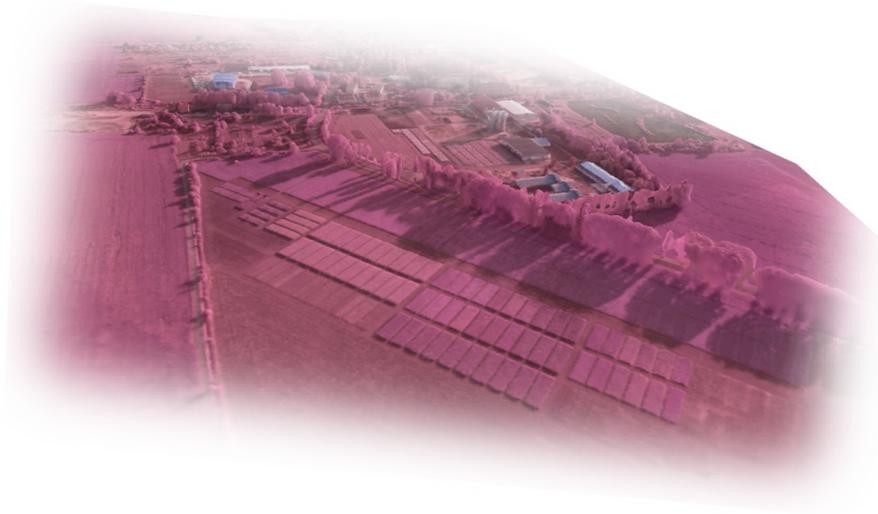
North Carolina has passed legislation to ensure the privacy of its citizens.

Any person who is the subject of unwarranted surveillance, or whose photograph is taken in violation of the provisions of NCGS 15A-300.1, shall have a civil cause of action against the person, entity, or state agency that conducts the surveillance or uses UAS to photograph for the purpose of publishing or otherwise distributing the photograph.

In lieu of actual damages, the person whose photograph is taken may elect to recover \$5,000 for each photograph or video that is published or otherwise distributed, as well as reasonable costs, attorneys' fees, and other relief as determined by the court.

Photographs or footage obtained in violation of this statute are not admissible as evidence in a criminal prosecution in any court of law in North Carolina except when obtained or collected under the objectively reasonable, good-faith belief that the actions were lawful.

## 8.5 LIMITATIONS ON USE OF SPECIAL IMAGING TECHNOLOGY



UAS are sometimes equipped with infrared sensors or other similar thermal imaging technology. NCGS 15A-300.1 restricts the legal uses of such technology by stipulating that commercial and private UAS operators may only use this technology for:

- Scientific investigation
- Scientific research
- Mapping and evaluating the earth's surface, including terrain and surface water bodies and other features
- Investigating or evaluating crops, livestock, or farming operations
- Investigating forests and forest management and other similar investigations of vegetation or wildlife

## 8.6 INTERFERENCE WITH MANNED AIRCRAFT BY UNMANNED AIRCRAFT SYSTEMS



Per NCGS 14-280.3, it is a felony to willfully damage, disrupt the operation of, or otherwise interfere with a manned aircraft through use of a UAS while the manned aircraft is taking off, landing, in flight, or otherwise in motion. Anyone who endangers the airspace in this manner may also be subject to charges under federal law.

## 8.7 UNLAWFUL POSSESSION AND USE OF UNMANNED AIRCRAFT SYSTEMS



Per NCGS 14-401.24, it is a felony to possess or use a UAS that has a weapon attached to it. Weapons are defined in NCGS 14-401.24 as:

- Those weapons specified in NCGS 14-269, 14-269.2, 14-284.1, or 14-288.8 and any other object capable of inflicting serious bodily injury or death when used as a weapon.

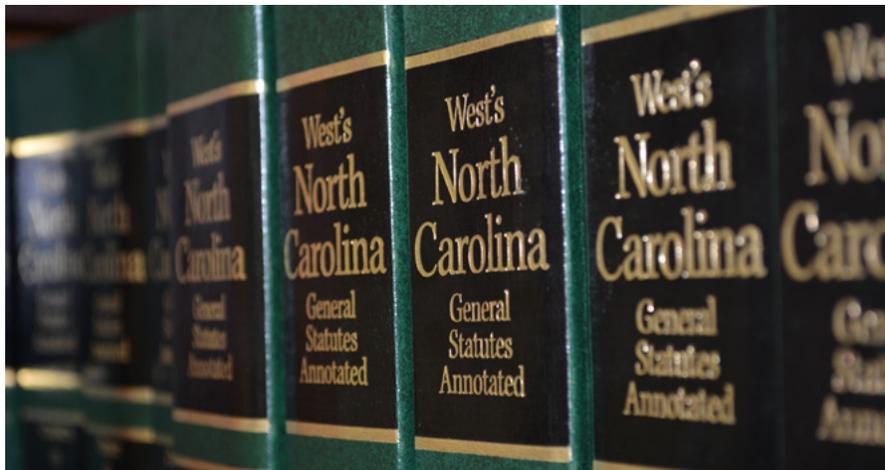
## 8.8 UNLAWFUL HARASSMENT OF PERSONS TAKING WILDLIFE RESOURCES



Per NCGS 113-295, it is a misdemeanor for a UAS operator to intentionally interfere with lawful hunting or fishing or to drive, harass, or intentionally disturb wildlife in order to disrupt lawful hunting or fishing. It is also illegal to take or abuse property, equipment, or hunting dogs that are being used for lawful hunting or fishing.

This rule does not apply to a person who accidentally interferes with lawful hunting or fishing while using the land for other lawful activity such as agriculture, mining, or recreation. This subsection does not apply to activity by individuals on land they own or lease.

## 8.9 CRIMES COMMITTED BY USE OF UNMANNED AIRCRAFT SYSTEMS



Per NCGS 14-7.45, all crimes committed by use of a UAS in North Carolina are governed by the state's laws. The question of whether the conduct by an unmanned

aircraft system while in flight over this State constitutes a crime by the operator will be determined by the laws of this State.

For example, NCGS 14-202 (c) states, “Unless covered by another provision of law providing greater punishment, any person who, while in possession of any device which may be used to create a photographic image, shall secretly peep into any room shall be guilty of a Class A1 misdemeanor.”

In this case, an operator who uses a UAS to secretly “peep into any room” could be charged with a misdemeanor, even though UAS are not specifically mentioned in the law.

Prospective UAS operators must remember that, while recent additions to the NCGS defined new criminal acts specifically associated with UAS use, **any** crime defined in North Carolina law is illegal, regardless of whether a UAS is used.

## **9 WHERE TO FIND CURRENT INFORMATION**

### **9.1 KEY OFFICE CONTACTS**

#### **9.1.1 The North Carolina Department of Transportation Division of Aviation UAS Program Office**

[Email](#) the UAS Program Office.

#### **9.1.2 The North Carolina Airport Facility Directory**

The 2015-2016 North Carolina Airport Guide can be downloaded [here](#) or through the NCDOT/DOA [website](#).

#### **9.1.3 FAA Contact Information**

For questions in reference to UAS Certificates of Authorization, Waivers, or Section 333 exemptions, contact the [FAA UAS Program Office](#).

For general questions, comments, or complaints about UAS, please [email](#) the FAA.

For general questions regarding FARs or enforcement, contact the FAA Flight Standards District Offices in Greensboro, at (336) 369-3900, or in Charlotte, at (704) 319-7020.

### **9.2 UP-TO-DATE UAS-RELATED INFORMATION**

#### **9.2.1 North Carolina Statutes**

NCGS concerning UAS operations are available on the North Carolina General Assembly’s [website](#).

A summary of the North Carolina statutes directly related to UAS can be found by visiting the NCDOT/DOA [website](#).

### **9.2.2 Commercial Operations (civil operations)**

A summary of FAA regulations for commercial UAS operations is available on the FAA [website](#).

### **9.2.3 Government Operations (public operations)**

A summary of FAA regulations for government UAS operations is available on the FAA [website](#).

### **9.2.4 Model Aircraft Operations (recreational or hobbyist operations)**

A summary of FAA recommendations for model aircraft and recreational UAS operations is available on the FAA [website](#) and the Know Before You Fly [website](#).

### **9.2.5 Section 333 Exemptions Explained**

A summary of the FAA Section 333 Exemption is available on the FAA [website](#).

### **9.2.6 COAs Explained**

A summary of the FAA COA process is available on the FAA [website](#).

### **9.2.7 Aeronautical Charts**

Current official charts can be obtained from FAA on their [website](#) or at local flight training schools. Unofficial free digital charts are available at [Skyvector](#).

### **9.2.8 Notice to Airmen (NOTAM) Information**

Information about NOTAM is available [here](#).

### **9.2.9 A Guide to Temporary Flight Restrictions (TFR)**

A guide to TFRs is available on the FAA [website](#).

### **9.2.10 Special Use Airspace (Military Operating Areas (MOAs), Restricted Areas)**

Information about special-use airspace, such as restricted areas and military operating areas, is available on the FAA [website](#).

This site should not be used as a sole source of information. Because these types of airspace can be activated and deactivated hourly, timely information should be obtained from the scheduling agency.