

Drones in the Coastal Zone (DITCZ) Community of Practice (CoP)

Thursday, July 28 from 1:30 - 3:00pm

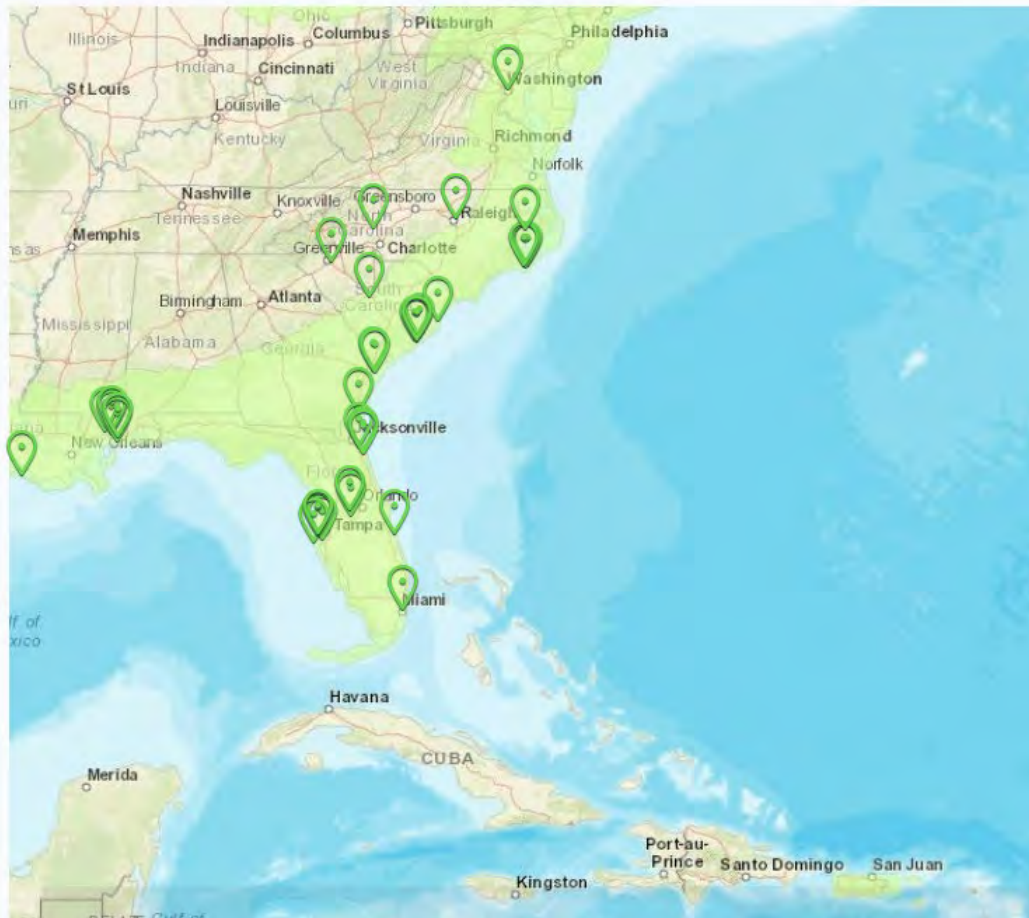
Meeting Notes

Attending: 50 online, 89 registered

Agenda

- Welcome & Introductions - Whitney Jenkins, NC National Estuarine Research Reserve and Steph Robinson, NOAA's Office for Coastal Management
 - Thank you extended to volunteers that helped make this call happen. If DITCZ CoP members are interested in volunteering to help make these calls happen, please reach out. Always looking for volunteers.
 - Thanks to everyone for joining today – a lot of folks from the workshop hosted in Oct 2020. Workshop Report: <http://secoora.org/wp-content/uploads/2022/01/0-Final-Report-Drone-Workshop-2020.pdf>
 - Stephanie led the technical overview and icebreakers. Icebreaker questions:

Where are you located?



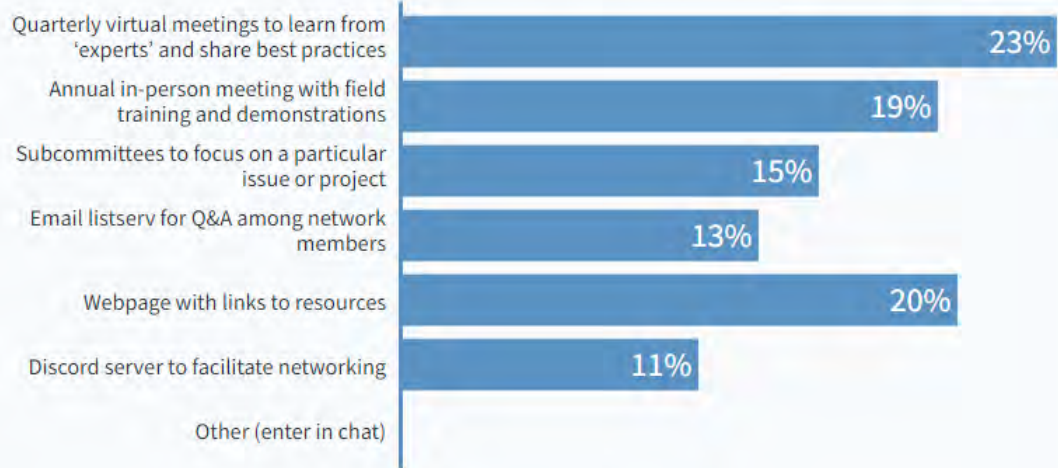
Poll 1 of 1

Ended

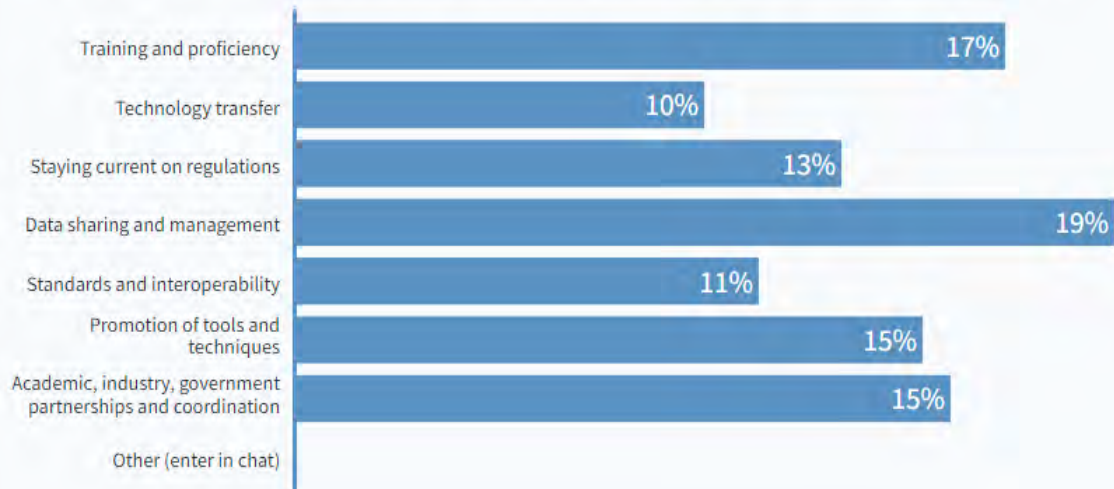
What sector do you represent? ^



What functions are most valuable to you for a Community of Practice? (select all that apply)

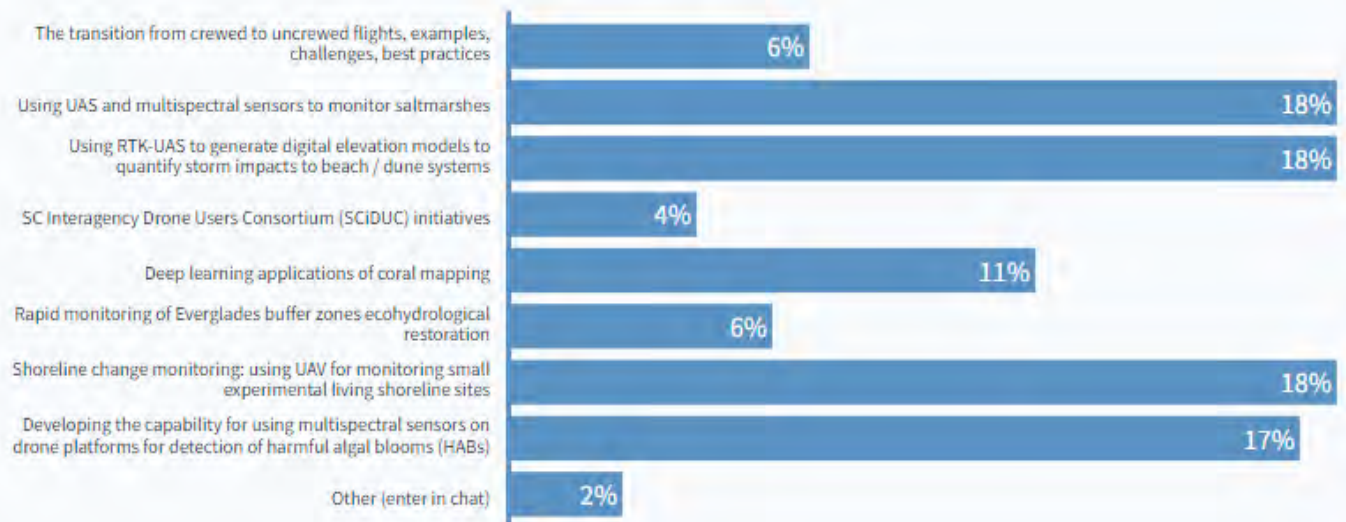


What themes would you like the Community of Practice to focus on? (select all that apply)



- Other suggested themes:
 - Data standards and interoperability
 - Lightning talks (2-3 min) with ongoing/early-stage projects to foster partnership, network with others interested
 - Best practices for data visualization
 - Subgroup for drone lidar users [several people agreed with this]

What presentations would you like to hear about at future Community of Practice virtual meetings?



- Navigating the Rules of the Sky - Troy Walton, Attollo ([See Troy's Presentation](#))
 - Presentation did a quick overview of drone safety that touched on where to fly, how high to fly, how to access / decipher maps of airspace, etc.
 - Airspace: Designed for occupied aircraft routing. Drones operate 400 feet or below to fly without an authorization. Need to understand maps to know where and how to fly. Tested on Part 107.
 - Remote Identification Rule (new): Currently must be able to see drones at all times. Remote Identification is the foundation to fly beyond visual line of sight. It will also allow law enforcement to track UAS control stations. Manufacturers must comply by September of 2022. Operators must comply by September 2023. Can fly in FRIA are drones without remote ID broadcast.
 - Mission Planning: determine where to fly legally. Need to know all regulations associated with flight to conduct. FAA's Drone Zone will require waivers. Find out if waiver is required. Check Apps (examples below)
 - Skyvector.com: VFR sectional map, weather info, pre-flight checks, cannot fly in a Temporary Flight Restrictions (always check NOTAMs for TFRs),
 - UAS facility maps: Low Altitude Authorization and Notification Capability (LAANC) expedites the process to get approval in identified areas (within minutes vs past 90-day delay). Must be within the LAANC grid.

- AirMap: log in with Part 107 and can apply for LAANC authorization via AirMap. Utilize GPS location to determine if authorizations are required.
- International Fly: Many countries copy US regulations. Go to <https://uavcoach.com/> to search for country regulations, but also confirm country regulations (UAV Coach might not list them all).
- Resources listed below:



- Q&A
 - FA Drone Zone, submitted waivers and DJI drones will not manually input on authorization to allow fly. Troy has experienced the same problem. Moving away from DJI drones.
 - Ever applied for a DROTAMs and submitted for airspace work? Troy has not applied for one.
 - Has anyone been able to get a waiver to fly over 400ft? Troy has not received one. It seems to apply to more remote locations, and it will be easier to get approved. Nicole Chappelle from NOAA has received a few as a public COA (Certificate of Approval). Will need visual observers to reduce the airspace.
 - DJI Drones are being phased out due to technology. Curious where people are getting drones that meet the USA requirements.
 - Blue UAS, from Defense Innovation Unit. 7 approved blue UAS drones. Pick those drones and do not need a waiver to fly. <https://www.diu.mil/blue-uas-cleared-list>
 - For Florida govt agencies: https://www.dms.myflorida.com/business_operations/state_purchasing/approved_drone_manufacturers
 - Florida DMS is creating their own security standards (a combo of NDAA/Blue List) which will be published Jan 1, 2023.
 - Is there guidance on when and can fly DJI drone / Chinese drones?
 - It is agency dependent. The National Defense Authorization act spells out buying new drones or entering new contracts. Cannot fly on Department of Defense or Department of Interiors lands. Outside DOD or DOI, it is contract, agency, and resource dependent.
 - ESRI based products for fleet management?
 - No one has used ESRI for Fleet Management capabilities.

- ESRI drone to map for image analysis.
- NC state gov using aloft AI.
- Currently flying a DJI Phantom 4 with Site Scan -LE for flight planning and processing with Drone2Map.
- Troy uses drone logbook for fleet management, easy for tracking and some drones will automatically update into drone log book.
- Action items & wrap up
 - Listserv email: ditcz_cop@secoora.org. Only group members can send messages to the list. To subscribe, email ditcz@secoora.org.
 - Everyone from the workshop in October is added to listserve and Abbey will add those who registered for this event today.
 - *Do we need rules for listserv for sharing items? Whitney will bring up at next steering committee meeting
 - Survey Results: Will be shared with Steering Committee for Review
 - Website: Will be housed on the SECOORA website and highlight COP mission, meeting announcement/agendas/notes, resources, etc.
 - Volunteer: reach out to help run the COP.

Why do we need a Community of Practice?

1. Rapid growth in technological capacity
2. Limited, opaque, and variable development of regulatory environment
3. Dynamic nature of environmental science and management

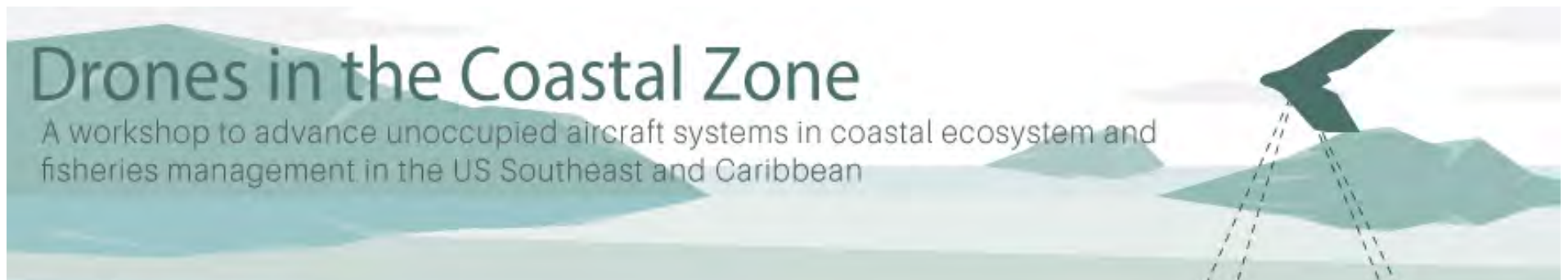


No single person can track all of this, yet everyone can contribute their expertise to support each other



DRAFT MISSION STATEMENT

The Drones in the Coastal Zone Community of Practice (DITCZ CoP) connects academic, research, commercial, governmental, and non-governmental sectors with common interests in coastal and ocean management to share resources, strategies, and innovations. Our goal is to support the transmission and expansion of knowledge and expertise for leaders, learners and professionals across the U.S. Southeast and Caribbean.



Potential components of a vibrant CoP





Navigating the Rules of the Sky

Troy Walton
Attollo, LLC



Pause (k)



Airspace

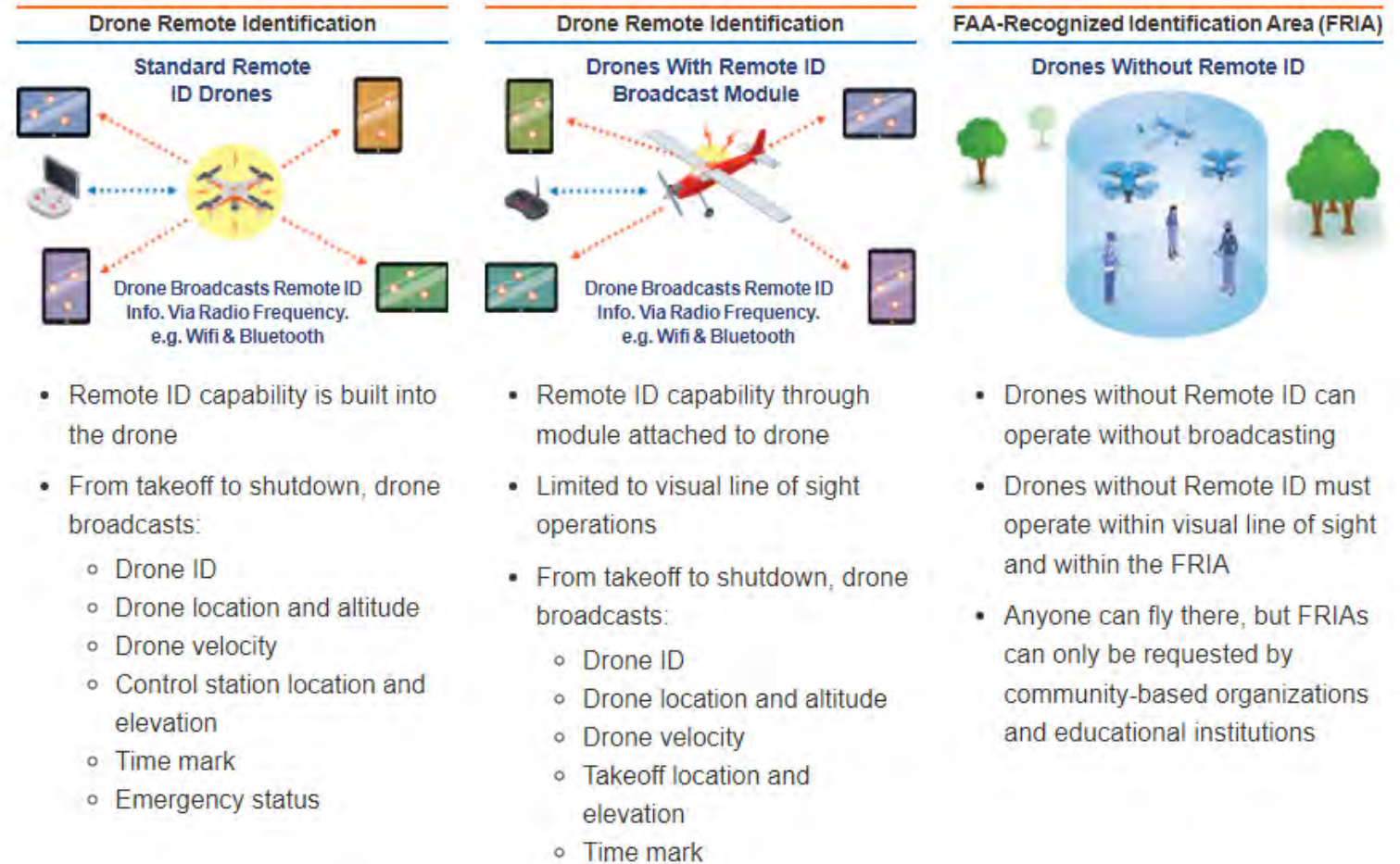
- Designed for occupied aircraft routing
- Visual Flight Rules (VFR) Sectional depicts 3-D airspace on a 2-D map
- Drone pilots must understand what is required of them for flights at specific locations
- Tested on Part 107 exam



Remote Identification

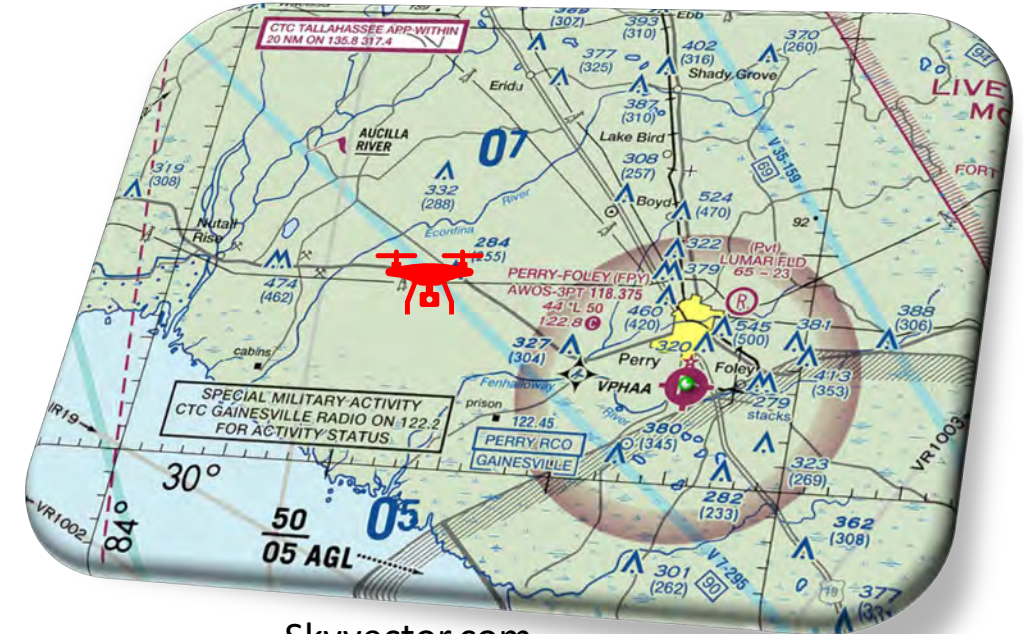
- Ability of a drone in flight to provide identification and location information that can be received by other parties (FAA)
 - Safety foundation for complex operations
 - Assists law enforcement and other federal agencies to find the control station
- Manufacturers must comply by September of 2022
- Operators must comply by September 2023

3 WAYS DRONE PILOTS CAN MEET REMOTE ID RULE

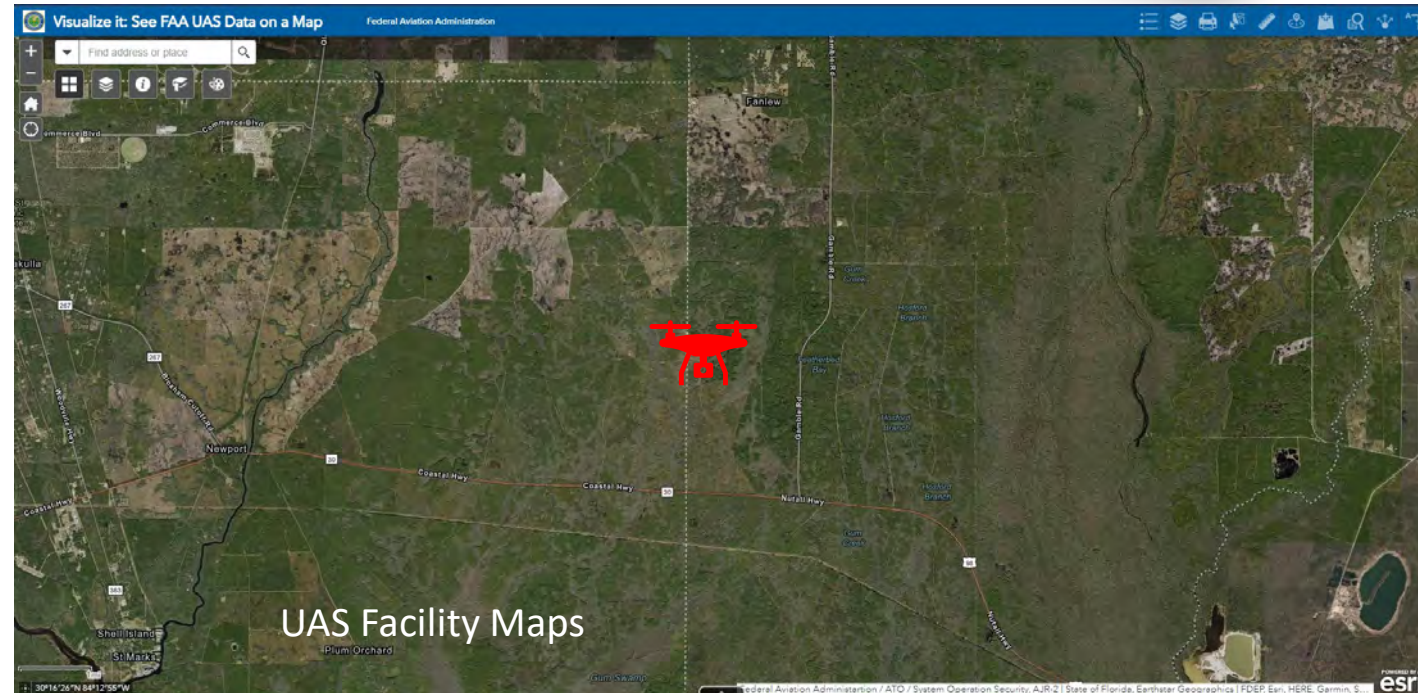
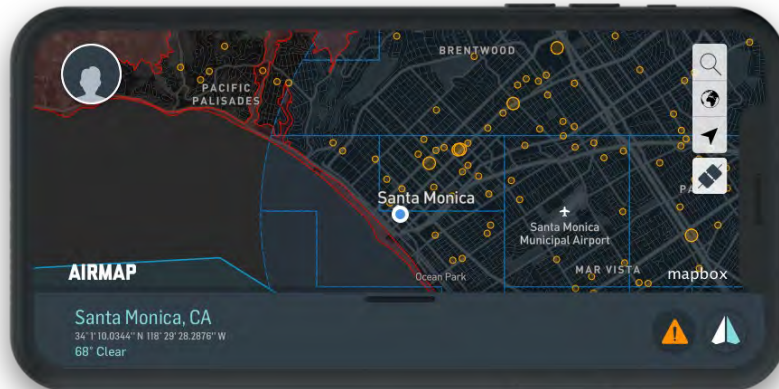


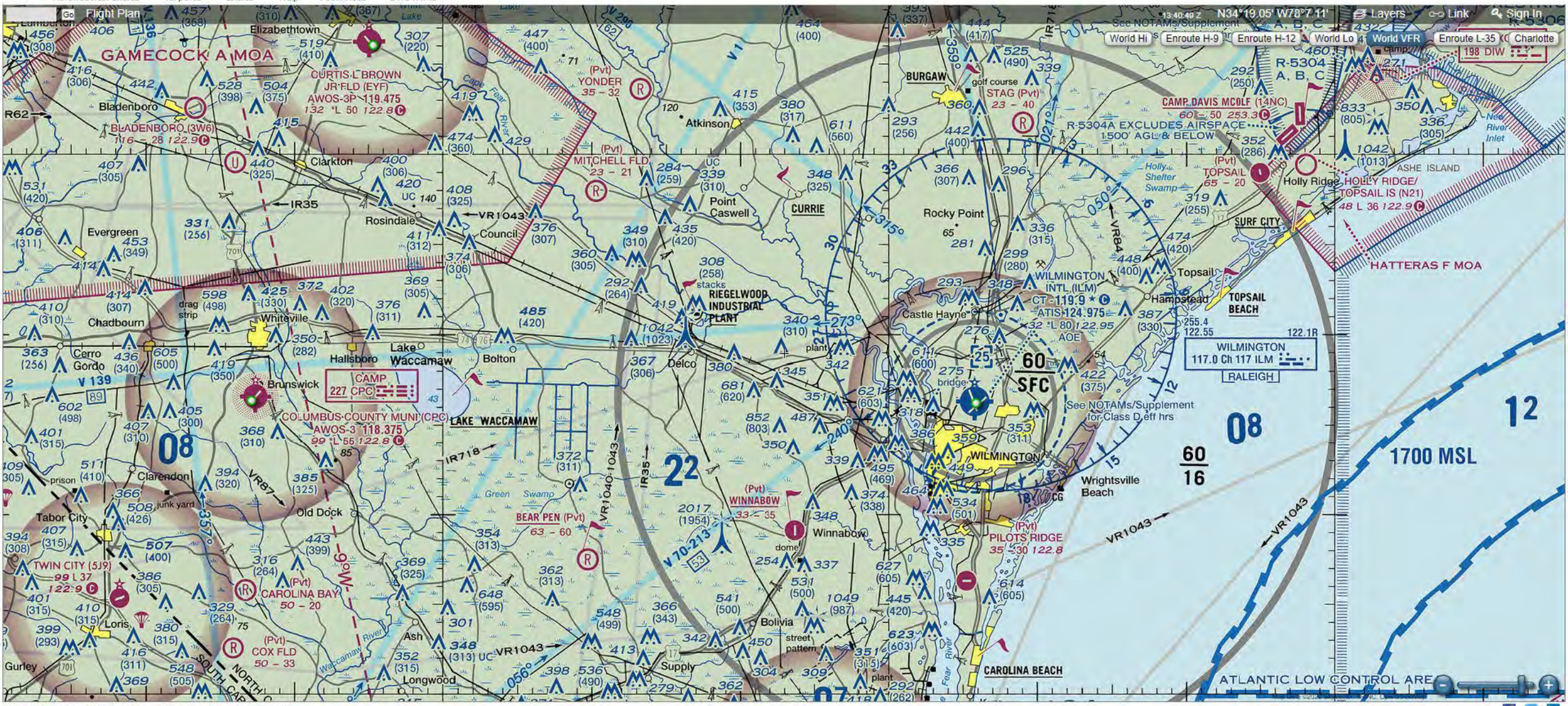
Mission Planning

- Will there be any waivers required?
 - Controlled airspace
 - Special Use Airspace
 - Wilderness area
 - State/local regulations
- Check skyvector.com for VFR sectionals and surrounding airspace
- UAS facility maps
- AirMap App



Skyvector.com





Pre-flight Checks

- Name recently changed from “Notice to Airmen” to “Notice to Air Missions” for inclusiveness
- Indicate real-time and abnormal status of the NAS impacting every user
- Concern the establishment, condition, or change of any facility, service, procedure or hazard in the NAS
- Always check NOTAMs for Temporary Flight Restrictions (TFRs)
 - www.notams.faa.gov
 - Skyvector.com
 - AirMap

Federal Aviation Administration

TFR List | TFR Map | Map Airports | TFR Help | NOTAM SEARCH | SUA

NOTAM

Number : FDC 2/3328 Download shapefiles

Issue Date : July 15, 2022 at 1321 UTC

Location : CAPE CANAVERAL, Florida

Beginning Date and Time : July 17, 2022 at 1350 UTC

Ending Date and Time : July 17, 2022 at 1639 UTC

Reason for NOTAM : Space Operations Area

Type : Space Operations

Replaced NOTAM(s) : N/A

Pilots May Contact : MIAMI (ZMA) ARTCC, 305-716-1589

Jump To: Affected Areas | Operating Restrictions and Requirements | Other Information

Affected Area(s)

Airspace Definition:
Region bounded by:

	Latitude:	Longitude:	FRD:
From:	28°51'16"N	80°42'19"W	OMN141034.4
To:	29°07'30"N	80°30'00"W	OMN108033.9
Clockwise on a 30 NM ARC Centered on:	28°37'03"N	80°36'47"W	OMN147048.7
To:	28°13'30"N	80°16'00"W	OMN145078.4
To:	28°25'01"N	80°30'29"W	OMN149061.9
To:	28°25'01"N	80°37'59"W	OMN155058.8
To:	28°25'01"N	80°41'44"W	OMN157057.4
To:	28°31'21"N	80°43'49"W	OMN157050.9
To:	28°38'01"N	80°47'01"W	OMN157043.7
To:	28°49'10"N	80°50'44"W	OMN154032.2
To:	28°51'16"N	80°47'14"W	OMN148031.8
To:	28°51'16"N	80°42'19"W	OMN141034.4

Altitude: From the surface up to and including 18000 feet MSL

Effective Date(s):
From July 17, 2022 at 1350 UTC
To July 17, 2022 at 1639 UTC

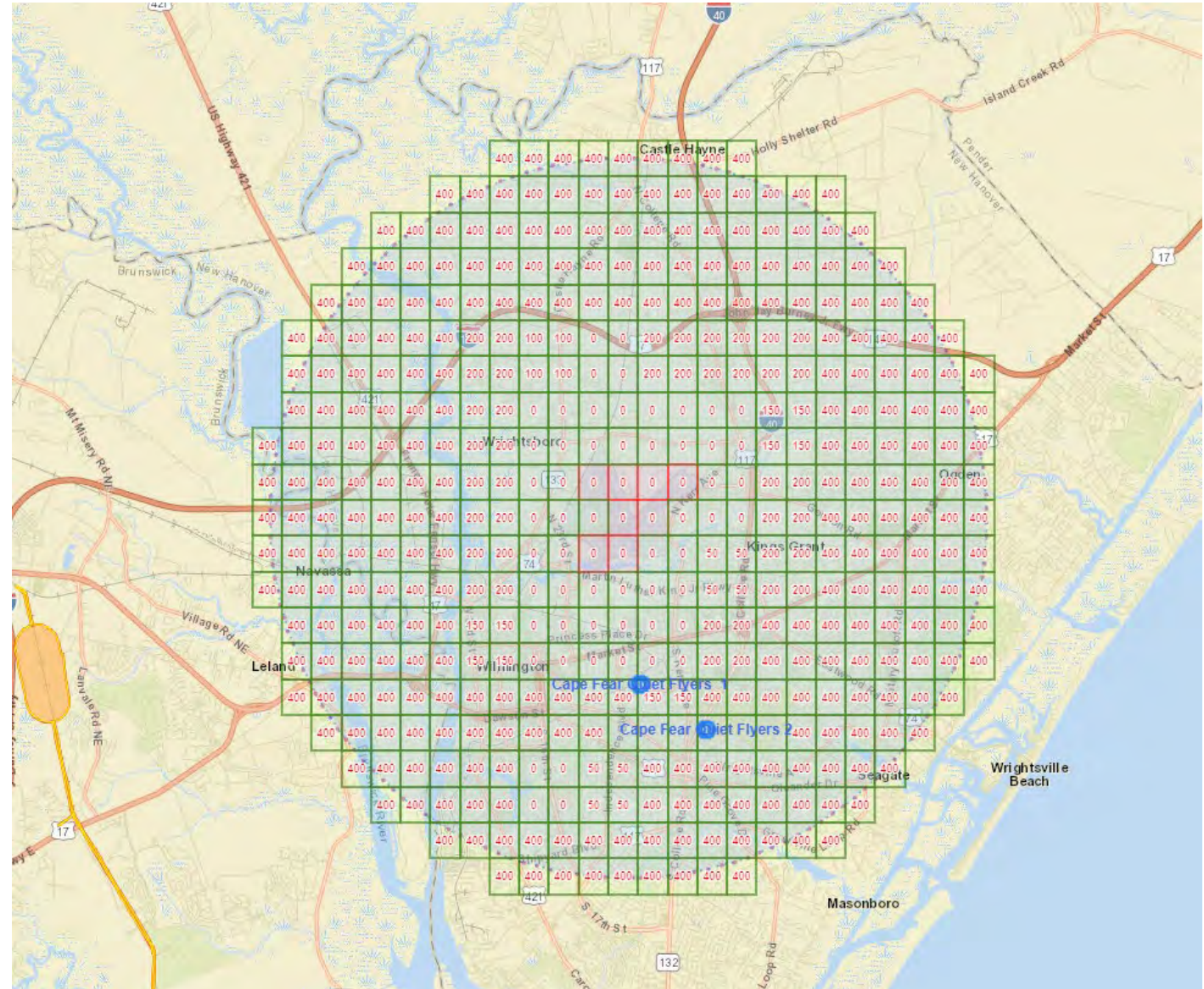
Operating Restrictions and Requirements

No pilots may operate an aircraft in the areas covered by this NOTAM (except as described).

THIS AREA ENCOMPASSES R2932, R2933, R2934, AND PORTIONS OF W497A, W158A, AND W158C. ADDITIONAL WARNING AND RESTRICTED AREAS WILL BE ACT IN CONJUNCTION WITH THE OPS. PILOTS SHALL CONSULT ALL NOTAMS REGARDING THIS

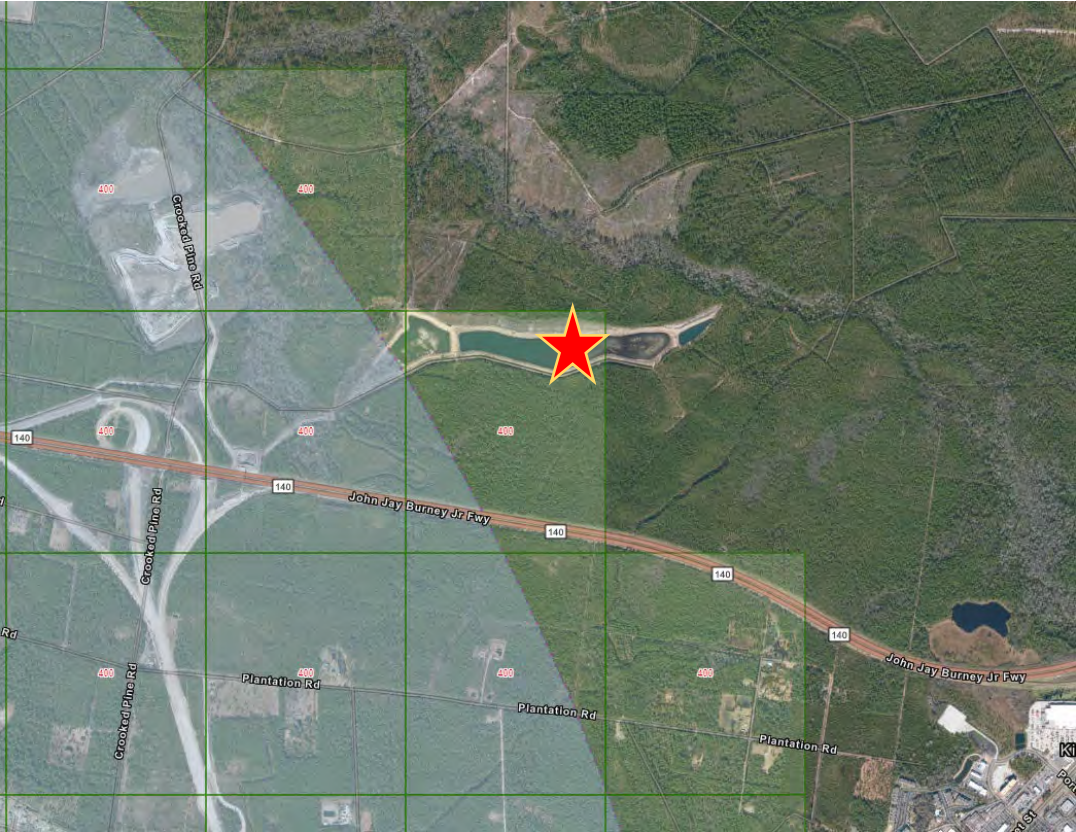
UAS Facility Maps

- Low Altitude Authorization and Notification Capability (LAANC)
- Provides airspace authorizations within minutes via approved apps
 - Previously took up to 90 days
- Controlled airspace near airports is segmented into squares with a max altitude
 - Must still apply for authorization to fly up to specified altitude
- If you want to exceed listed altitude, apply through DroneZone website





UAS Facility Map with imagery basemap



VFR Sectional





FAA's Drone Zone

- Location to apply for:
 - Waivers and authorizations
 - Register aircraft
 - Review regulations
 - File accident reports
- Faadronezone.faa.gov

New Part 107 Waiver/Authorization Application

Please select one of the following to start your Application (required).

OPERATIONAL WAIVER: Use this to request a waiver to the provisions of Part 107 waivable under 14 C.F.R. 107.200 (e.g. operations at night, operations from a moving vehicle, operation beyond line of sight, operation over people, operation requiring a visual observer, operations of multiple UA by one pilot, operation near aircraft, or waivers from operating limitations on groundspeed, altitude, minimum visibility, or minimum distance from clouds).

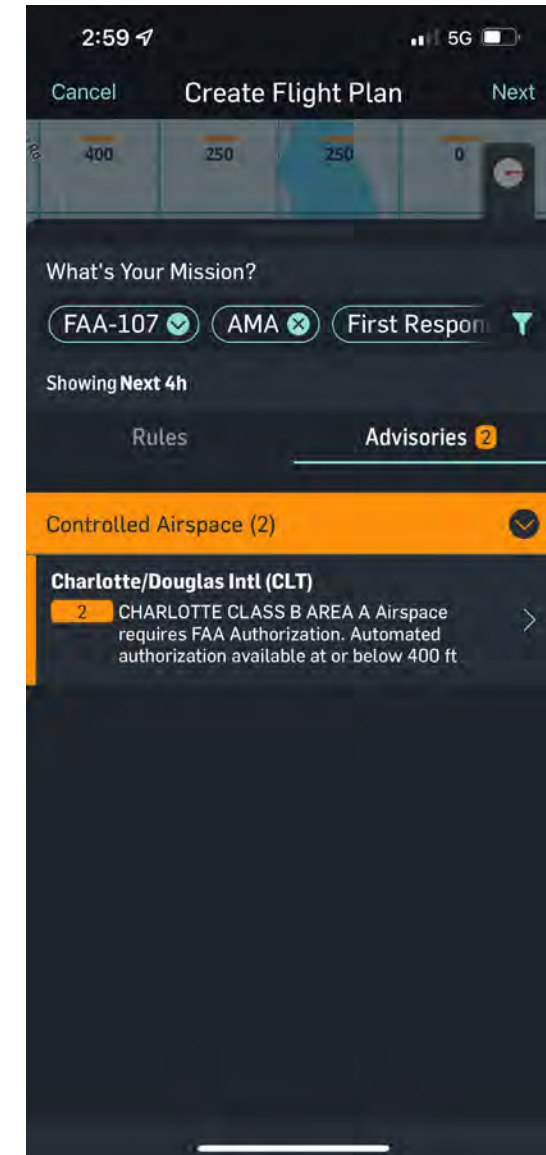
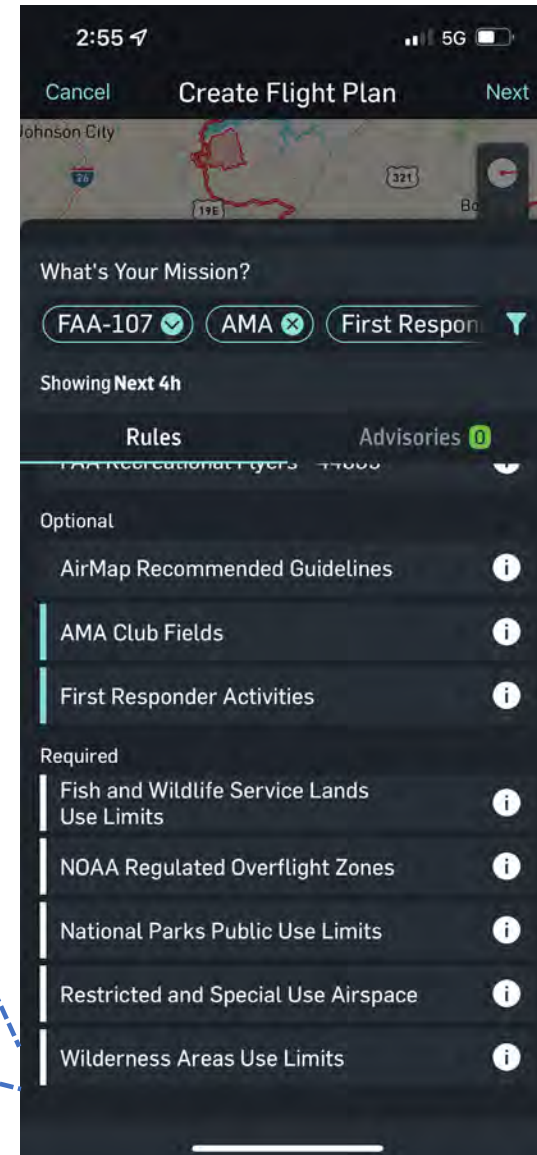
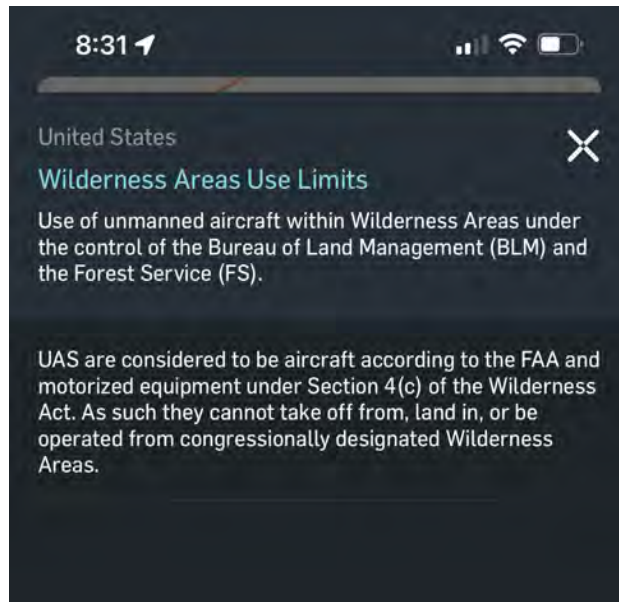
AIRSPACE AUTHORIZATION: Use this to request access to controlled airspace. An airspace authorization is the mechanism by which an operator may seek Air Traffic Control (ATC) approval to operate in controlled airspace. Authorizations can be for a specific location or for broad areas governed by a single ATC jurisdiction.

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION	
CERTIFICATE OF WAIVER OR AUTHORIZATION	
ISSUED TO Troy Walton	POC PHONE NUMBER 502-649-6629
ATTN: Troy Walton	
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 Operations under this certificate of authorization are limited to the maximum altitude listed below. This altitude is an absolute value and it shall not be added to the height of any structures. Class of Airspace: D At or Below: 100' Above Ground Level (AGL) Location: 35° 3' 44" N, 77° 3' 4" W Radius: 0.10 NM Under the Jurisdiction of: New Bern FAA Contract Tower (EWN FCT) Airport Identifier: EWN	
LIST OF WAIVED REGULATIONS BY SECTION AND TITLE N/A	
STANDARD PROVISIONS	
<ol style="list-style-type: none"> 1. A copy of the application made for this certificate shall be attached and become a part hereof. 2. This certificate shall be presented for inspection upon the request of any authorized representative of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations. 3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein. 4. This certificate is nontransferable. 	
NOTE - This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.	
SPECIAL PROVISIONS	
Special Provisions <u>1</u> to <u>3</u> , inclusive, are set forth in this authorization.	
This certificate 2019-P107-ESA-19361 is effective from <u>October 24, 2019</u> to <u>December 31, 2019</u> , and is subject to cancellation at any time upon notice by the Administrator or his/her authorized representative.	
BY DIRECTION OF THE ADMINISTRATOR	
<u>FAA Eastern Service Center, ESC</u> <small>(Region)</small>	MARCUS I VALDES <small>Digitally signed by MARCUS I VALDES Date: 2019.10.23 09:59:29 -04'00'</small> <u>For Ryan Almasy</u> <small>(Signature)</small>
<u>Operations Support Group Manager, AJV-E2</u> <small>(Title)</small>	



Airmap

- Free app on Android and iOS
- Utilizes GPS location from device to determine if authorizations are required
- Log in with Part 107 certificate number to apply for airspace authorization
 - Time of launch
 - Location
 - Radius
 - Altitude





10:42 ↖

Flight Plan Details Next

What is the expected visibility at takeoff? ⓘ
10 mi

What is the maximum speed of the flight? ⓘ
15 mph

Does the drone have anti-collision lighting? ⓘ

Is the flight occurring within visual line of sight (VLOS)? ⓘ

Is the drone registered? ⓘ

Have you completed your preflight check for airworthiness and communications connectivity? ⓘ

Has the pilot in command obtained a US Part 107 certification? ⓘ

NEXT

2:55 ↖

Cancel **Create Flight Plan** Next

Radius 1,500 ft

What's Your Mission?

Showing Next 4h

2:59 ↖

Cancel **Create Flight Plan** Next

Radius 500 ft

What's Your Mission?

Showing Next 4h

International Regulations

- Many countries have adopted U.S. regulations prohibiting flights above 400ft AGL
- Research the rules extensively before departing internationally with your drones
- uavcoach.com is a great starting point, but verify from that country's aerospace organization



Resources

LAANC approved apps

- Airmap
- Hover
- Airspacelink
- Kittyhawk
- Skyward
- UASidekick

Websites

- <https://faadronezone.faa.gov>
- <https://www.skyvector.com>
- https://www.faa.gov/uas/commercial_operators/uas_facility_maps
- <https://www.uavcoach.com>
- <https://www.notams.faa.gov>