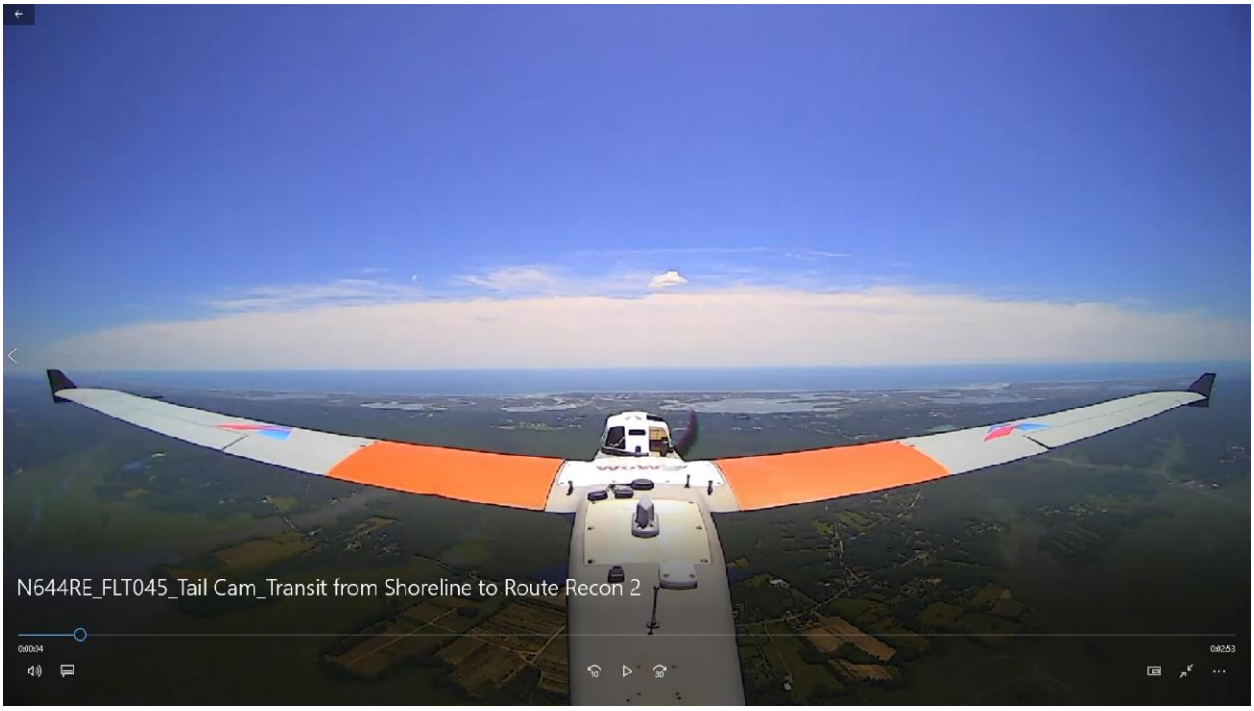
Final Report
South Jersey Emergency Response Functional Drill and Exercise Integrating Drones and BVLOS UAS Into Emergency Response
Summer 2021



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Executive Summary

Unmanned Aircraft Systems (UAS) are valuable tools in disaster response. They are force multipliers that leverage human capital, accelerate response and increase the safety of first responders and people in crisis[1].

Small UAS (sUAS or drones) operate under Part 107 Rules below 400'. They are ideal tools for local situational awareness and infrastructure inspections including bridges, electric and telecom towers, water, gas and sewage infrastructure, hospitals, shelters, etc. These platforms weigh less than 55 pounds and typically operate for 20-60 minutes on battery power. When communications services are available, streaming imagery can be delivered to Municipal and County OEMs and Regional Incident Commands in real-time. While small UAS (sUAS or drones) are becoming ubiquitous in other fields, they are not widely used in the early stages of disaster response due to concerns about safe deconfliction with conventional (manned) helicopters performing low altitude search and rescue (SAR) missions.

A newer type of unmanned aircraft, Beyond Visual Line of Sight (BVLOS) UAS have also shown great value in responding to disasters. These aircraft provide tactically taskable mapping, surveillance and emergency communications service functions at 80 times the scale of sUAS. Because of their payload capacity (50 pounds), persistence (up to 20 hours), ceiling (15,000') and range (hundreds of miles), they can, for example, digital imagery-based damage maps of the entire Atlantic coastline of New Jersey can be produced and delivered in less than a day. Another high value use case that has been demonstrated provides 4G LTE communications in post-disaster, communications denied environments, such as occurred on barrier islands after Hurricane Sandy. Long endurance, medium altitude BVLOS UAS operate today on a limited basis in the National Airspace System (NAS) under specialized Certificates of Waiver or Authorization (COA). With regulatory approval for routine BVLOS UAS operations in the NAS emerging as an FAA priority, the use of UAS in disaster response has become an immediate opportunity to increase the safety and speed of response.

The 2021 campaign expanded upon previous tabletop and functional exercises and tested additional technologies (Table 1):

	2016	2017	2021
Participants	19	23	80
Government Entities	9	8	8
Concurrent Flight Operation	1	2	5
Simultaneous Data Streams to Incident Command	1	1	7

Table 1. Progression in South Jersey Exercises.

[1] See https://www.americanaerospace.com/post/unmanned-autonomous-aviation-systems-as-a-postdisaster-human-capital-force-multiplier; https://www.youtube.com/watch?v=npGVqYicltU&t=56s; and https://www.youtube.com/watch?v=4D4ZwheoFro.

Sponsored by the Atlantic County Economic Alliance (ACEA), the National Aviation Research & Technology Park (NARTP), the Smart Airport and Aviation Partnership (SAAP) and Cape May County, the 2021 Emergency Response Exercise was managed by American Aerospace Technologies, Inc. This exercise built on two (2) prior exercises and made great strides towards the goal of enabling post-disaster UAS operations. This exercise was the largest UAS-based emergency response exercise in southern New Jersey to date, and considered by all to be the most successful, owing to the increased number and type of participants, the number and sophistication of the flight operations, the number of streaming imagery services delivered, and the progress made towards the goal of creating a process for unmanned aircraft to operate safely in airspace with conventional aircraft in the aftermath of disasters.

The Exercise confirmed that there is strong interest across South Jersey to utilize UAS after disasters, and that there are many highly capable unmanned aerial operators across South Jersey. However, there is no process in place to enable them to safely operate in the immediate aftermath of disasters. To solve this problem, both the FAA and the Regional Incident Command leadership must provide approval for flight operations after disasters. The absence of a reliable and repeatable process to deconflict aircraft operations is a key obstacle to deploying sUAS and UAS during the early stages of disaster response. Achieving this objective will increase the safety and effectiveness of first responders, provide more rapid support to people in crisis, and accelerate recovery.

Goals and Benefits

Goals included:

a. Develop and validate plans, policies, agreements and procedures for the safe and effective integration of sUAS and UAS into airspace with manned aircraft in disaster response.

b. Test use cases of high interest to the emergency response and critical infrastructure communities.

c. Demonstrate delivery of sUAS and UAS streaming data to County and local Incident Commands and to a simulated Regional Incident Command (RIC);

d. Validate readiness and identify gaps that must be filled prior to deployment on actual disasters;

e. Provide tangible test results that may be used by the FAA and others in the decision-making chain to authorize sUAS and UAS in emergency response; and

f. Provide public outreach and educational value that continues to build Southern New Jersey's reputation as a hub for aviation and UAS activity.

Regional Benefits included:

a. Improved preparedness for coastal hurricanes (of particular regional relevance);

b. Contribution to National Aviation Research and Technology Park (NARTP) and Southern New Jersey branding in aviation science/technology; and

c. Precursor to research and technology events that will be sponsored regularly by NARTP's newly formed Center of Excellence for Disaster Management.

Participants

The following entities participated in the event (Table 2):

Participant Name	Participant Type
Federal Aviation Administration	Government
New Jersey Board of Public Utilities	Government
United States Coast Guard	Government
New Jersey American Water	Utility
Atlantic City Fire Dept.	Emergency Mgt.
Atlantic County Office of Emergency Mgt.	Emergency Mgt.
Cape May County Office of Emergency Mgt.	Emergency Mgt.
Salem County Office of Emergency Mgt.	Emergency Mgt.
New Jersey State Police	Law Enforcement
AeroDefense	Private
American Aerospace Technologies	Private
Sky Scape Industries	Private
Sunhillo Industries	Private

Table 2. Participating Organizations.

Exercise Structure

The event consisted of two parts: 1) a "Tabletop Exercise" to select scenarios and to develop draft procedures and processes; and 2) a "Functional Drill" to exercise and operationally test those procedures in a simulated disaster.

Emergency Scenario

A meteorology team defined the weather conditions to be assumed during the Exercise. Dubbed "Hurricane Carole", a Category 3 storm, the team settled on a set of meteorological conditions that create a high degree of uncertainty about the status of regional infrastructure including roads, bridges and emergency shelters as well as electric and water infrastructure.

Tabletop Exercise

A Tabletop Exercise took place on May 10, 2021, at the National Airport Research & Technology Park (NARTP) in Galloway, New Jersey (see Attachment 1). The goals of the tabletop exercise were to:

(1) Define and develop a coordination process for airspace requests between drone/UAS operations teams, County Emergency Operations Centers (EOCs) and a Regional Incident Command.

(2) Bring together stakeholders, agencies, and flight operation specialists to discuss the purposes for the functional drill, current procedures/processes and sequentially develop each flight operation selected for the functional drill.

Figure 1 depicts the process developed at the Tabletop Exercise and tested during the Functional Drill.

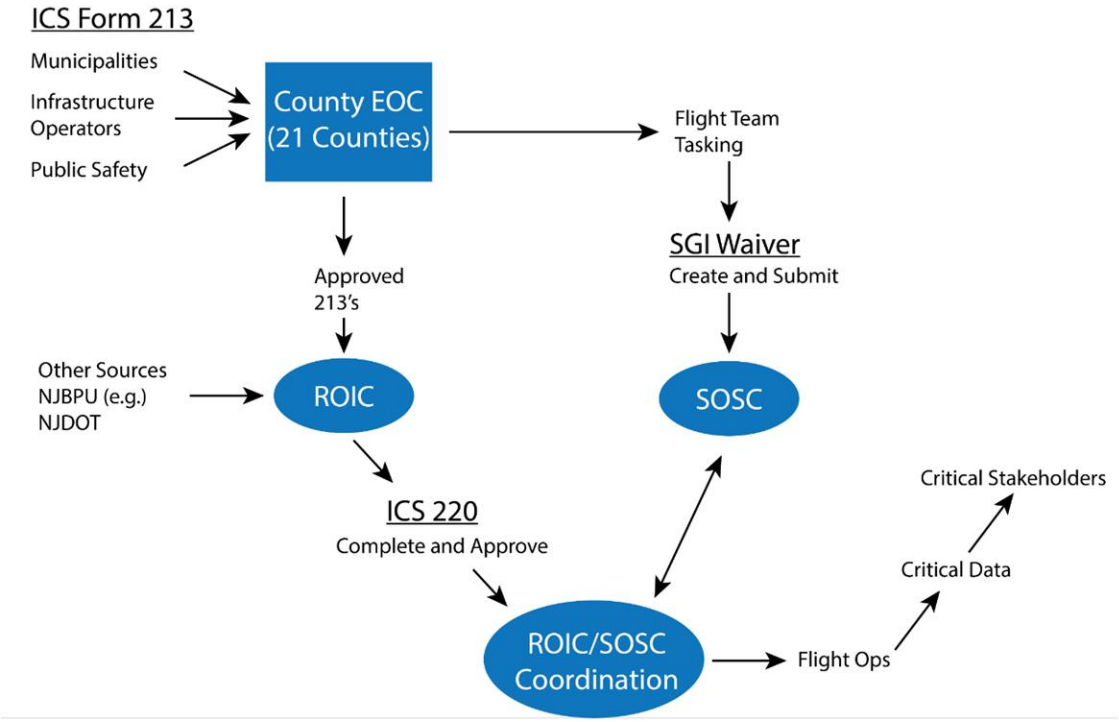

Figure 1. Approval process for Drones and BVLOS UAS after disasters.

New Jersey has 21 counties. After disasters, FEMA ICS Form 213RR is used to request resources from the Regional Incident Command (Attachment 2). Each county may have dozens of drone operations requests from County OEM, Municipalities, Law Enforcement and Critical Infrastructure operators. If these requests were to flow directly to Regional Incident Command, hundreds of requests would need to be managed. Therefore, a gating process was developed in which drone operations request approval for flights at the County OEM level. In this scenario, County OEMs prioritize drone operations in their area of responsibility, and forward priority requests to the Regional IC (RIC). The RIC would also take requests from other agencies including Dept. of Public Utilities and the Dept. of Transportation, among others.

At the RIC level, an Air Operations Branch reviews all requests and evaluates them in the context of conventional aviation operations (e.g., search and rescue). When safe segregation of conventional and drone operations can be assured, an ICS Form 220 Air Operations Summary (Attachment 3) is submitted to the FAA SOSC. In parallel, when UAS operations are notified of RIC approval, they submit an SGI Waiver Request to the SOSC. These documents prescribe the limits in location and time that the operator is permitted to conduct their aviation operation. Once the ICS 220 and SGI Waiver are reviewed and approved by the SOSC, the parties are notified, and the flight activity can proceed as specified.

Functional Drill

On June 23rd, 2021 a diverse and talented group of 80 individuals from public and private organizations including the Federal Aviation Administration, US Coast Guard Sector Delaware Bay, NJ State Police, NJ Bureau of Public Utilities, county and local emergency management offices, law enforcement and critical infrastructure operators, as well as flight teams from public and private entities, gathered at the National Airport Research & Technology Park (NARTP), Woodbine Municipal Airport, and at locations across southern New Jersey. The Woodbine Municipal Airport was the staging location for the sUAS/UAS flight crews. NARTP served as the (simulated) Regional Incident Command for the drill.

The goals of the Functional Drill were to:

(1) Test plans, policies, agreements, and procedures for the safe and effective integration of sUAS and UAS into airspace with manned aircraft in disaster response.

(2) Test use cases of high interest to the emergency response and critical infrastructure communities.

(3) Demonstrate delivery of sUAS and UAS streaming data to County and local Incident Commands and to a simulated Regional Incident Command (RIC).

(4) Validate readiness and identify gaps that must be filled prior to deployment on actual disasters.

(5) Provide tangible test results that may be used by the FAA and others in the decision-making chain to authorize sUAS and UAS in emergency response; and

(6) Provide public outreach and educational value that continues to build Southern New Jersey's reputation as a hub for aviation and UAS activity.

Functional Drill | Area of Operations

The Functional Drill spanned across 1,800 square miles of South Jersey from Salem County to Atlantic County to Cape May County. Figure 2 depicts the area of operation of the Functional Drill. See Figure 2.

Figure 2. Functional Drill Area of Operations.

Multiple cutting-edge technologies were tested and demonstrated during the exercise, including:

1. RF-based counter-drone systems (AeroDefense)
2. Semi-autonomous fixed-wing sUAS, with object-on-target tracking (NJ American Water & Censys)
3. ADS-B aircraft identification and tracking solutions (Sunhillo)
4. Real-time mapping of large areas using the AiRanger™ UAS (American Aerospace)
5. Electric Tower Inspections (Sky Scape for ACE)
6. Live streaming of sUAS operations from remote locations (Salem OEM & ACFD).
7. Delivery of seven concurrent live video and data feeds into the RIC.

Discussion

According to the draft FAA Airspace Management Plan for Disasters, rotary wing SAR Operations occur surface to 500' AGL. Deconfliction between rotary wing SAR and sUAS (drones) is therefore the key to safe, concurrent operations below 500' (see Figure 3). BVLOS UAS operations typically occur in the 1,000 to 4,000' AGL regime where rotary and fixed-wing SAR operations are limited to transition and helicopter refueling operations, resulting in generally limited traffic conflicts in this altitude range. Deconfliction

between BVLOS UAS and both fixed-wing SAR operations is therefore the key if safe, concurrent operations are to occur with conventional aircraft.

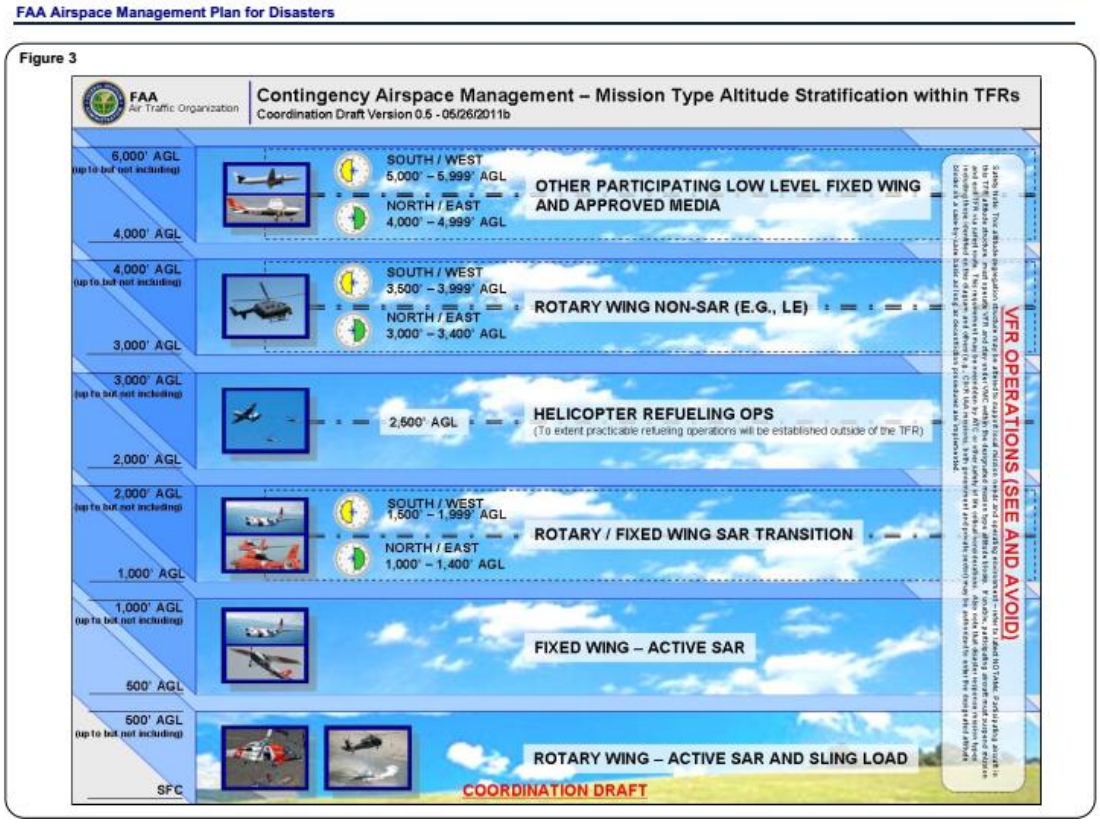

Figure 3. Post-Disaster Altitude Stratification within TFRs.

In the immediate aftermath of disasters such as hurricanes, the FAA Air Traffic Control System Operations Support Center (SOSC) is on standby to approve Temporary Flight Restrictions (TFRs) over disaster zones. Generally, a TFR is requested by the Regional Incident Command (RIC) responsible for managing the disaster response. In the case of a hurricane striking Southern New Jersey, the TFR request falls under the authority of the New Jersey State Police NJSP Regional Operations and Intelligence Center (ROIC).

Figure 4 below depicts a conceptual TFR Procedural Deconfliction airspace envelope for BVLOS UAS operations. In this scenario, two columns of airspace are established, one at the launch/landing site, the other over the approved area of operation. The takeoff/landing column is surface to ceiling, while the column over the surveillance zone has a 1,000' floor. A horizontal transit zone – limited in breadth and height - specifies the limited airspace used for BVLOS UAS.

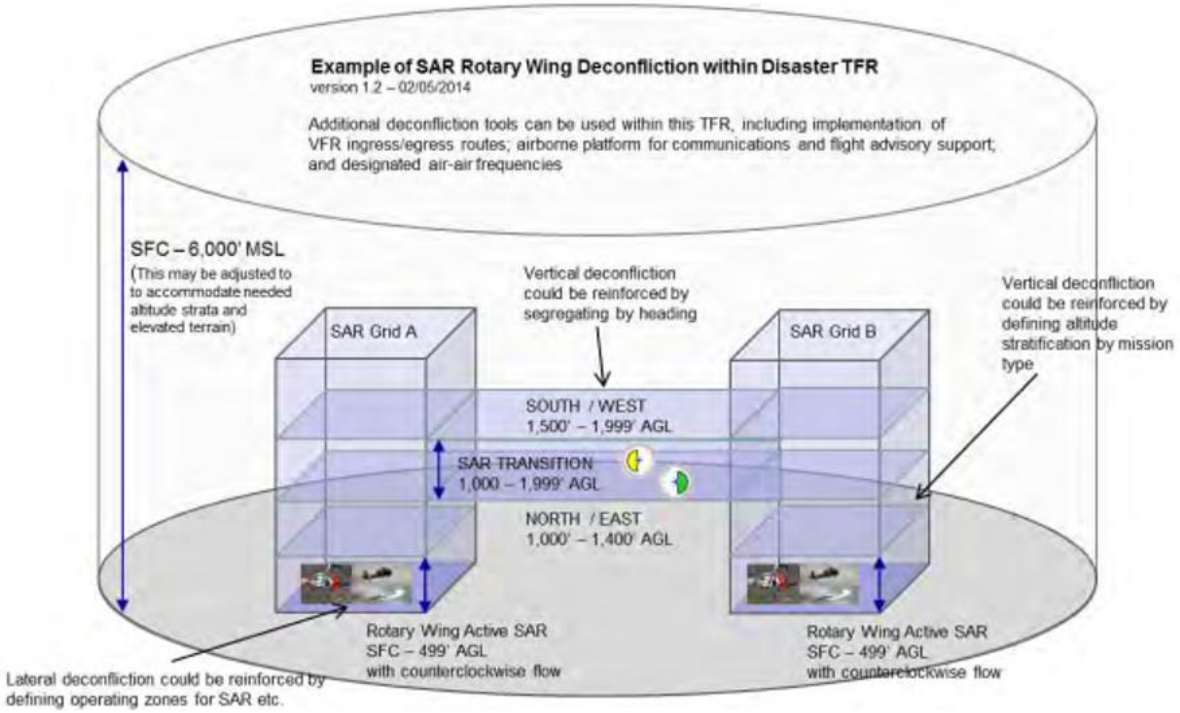

Figure 4. BVLOS UAS Deconfliction within TFRs

Technical Achievements

- NJ American Water's first fixed-wing VTOL sUAS data collection operation
- Salem County OEM's first live data stream from a small UAS (drone)
- Atlantic City Fire Department's first live data stream using apparatus Wi-Fi
- Sky Scape Industries electric transmission inspection (ACE)
- AATI's first disaster response exercise with the AiRanger BVLOS UAS
- Integration of Sunhillo's ADS-B aircraft identification and tracking solution into the operation
- Simul-streaming 7 separate feeds from aircraft and ground systems to a simulated Incident Command Center using conventional LTE and freely available online tools.

Conclusions

Participants found that this Exercise produced value for both the unmanned aviation and emergency response communities. It also holds value to the sustainability and economic vitality of the entire Southern New Jersey region and may have precedential benefit for coastal communities across the country.

The Exercise confirmed that there is critical need to advance emergency response after disasters, that there is strong interest across South Jersey to deploy UAS, and that there are many highly capable unmanned aerial operators in South Jersey capable of supporting disaster response. However, there is no process in place to enable them to safely operate in the immediate aftermath of disasters. The FAA and the Regional Incident Command leadership must provide approval for flight operations within a TFR after disasters. While the FAA stands ready to support disasters, the absence of a reliable and repeatable process to deconflict aircraft operations is a key obstacle to deploying sUAS and UAS during the early stages of disaster response. Achieving this objective will increase the safety and effectiveness of first responders, provide more rapid support to people in crisis, and accelerate recovery.

Recommended Next Steps

In order to progress the airspace coordination and air operations approval process, a 2022 Emergency Response Exercise is recommended. It is critical that personnel from the NJSP Regional Incident Command participate, along with continued participation of the FAA SOSC, County and municipal OEMs and critical infrastructure operators. In 2022, we recommend high concentration on developing the procedures and processes discussed herein (which requires an earlier start to the program), followed by another one-day operational exercise in May or June, before hurricane season.

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HURRICANE CAROLE TTX

AGENDA

9:00 am	**Sign-In**
9:30 am	**Welcome and Introduction** *Howard Kyle - NARTP* *Will Morey – Cape May County Freeholder* *Vince Jones - AC OEM, TTX Facilitator* *David Yoel - CEO, AATI*
	Brief Self-Introductions
10:00 am	**Hurricane Carole: Post-Landfall** New Jersey Challenges 24 Hours Post-Landfall *David Yoel, AATI* Hurricane Assessment for Atlantic County *Vince Jones, AC OEM* Hurricane Assessment for Cape May County (Region) *Tim Cwik, CMC OEM*
10:30 am	**TTX Methodology** *Vince Jones, AC OEM, TTX Facilitator*
10:45 am	**Air Operations Approval Process and TTX Goals** *David Yoel, American Aerospace Technologies, Inc. (AATI)*
11:00 am	**Scenario Short Discussion, All Participants**
11:15 am	**Breakout Sessions**
	1) Search & Rescue (sUAS)
	2) Bridge Inspection (sUAS)
	3) Water Infrastructure Inspection (sUAS)

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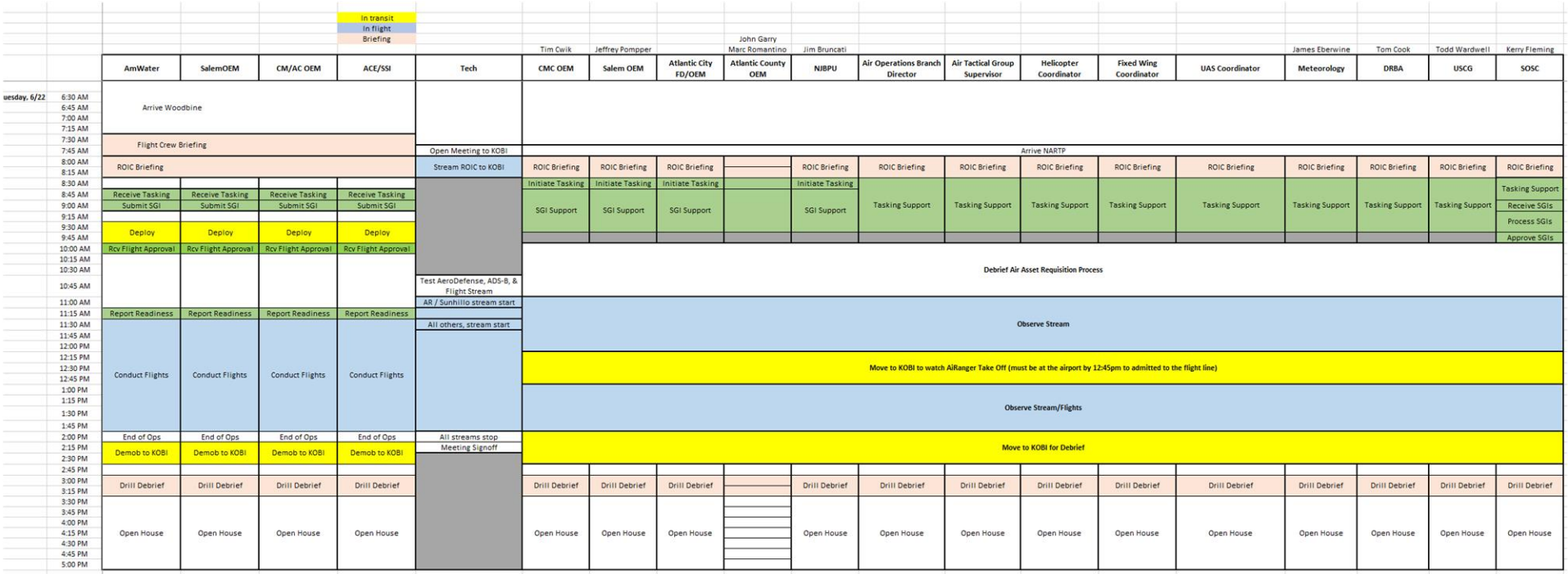
Attachment 2 | Functional Drill Agenda



				In transit																	
				In flight																	
				Briefing																	
							Tim Cwik	Jeffrey Pompper		John Garry Marc Romantino	Jim Bruncati						James Eberwine	Tom Cook	Todd Wardwell	Kerry Fleming
		AmWater	SalemOEM	CM/AC OEM	ACE/SSI	Tech	CMC OEM	Salem OEM	Atlantic City FD/OEM	Atlantic County OEM	NJBPU	Air Operations Branch Director	Air Tactical Group Supervisor	Helicopter Coordinator	Fixed Wing Coordinator	UAS Coordinator	Meteorology	DRBA	USCG	SOSC
uesday, 6/22	6:30 AM	Arrive Woodbine																			
	6:45 AM																				
	7:00 AM																				
	7:15 AM																				
	7:30 AM	Flight Crew Briefing																			
	7:45 AM					Open Meeting to KOBI	Arrive NARTP														
	8:00 AM	ROIC Briefing				Stream ROIC to KOBI	ROIC Briefing	ROIC Briefing	ROIC Briefing		ROIC Briefing	ROIC Briefing	ROIC Briefing	ROIC Briefing	ROIC Briefing	ROIC Briefing	ROIC Briefing	ROIC Briefing	ROIC Briefing	ROIC Briefing	ROIC Briefing
	8:15 AM						Initiate Tasking	Initiate Tasking	Initiate Tasking		Initiate Tasking										Tasking Support
	8:30 AM																				
	8:45 AM	Receive Tasking	Receive Tasking	Receive Tasking	Receive Tasking		SGI Support	SGI Support	SGI Support		SGI Support	Tasking Support	Tasking Support	Tasking Support	Tasking Support	Tasking Support	Tasking Support	Tasking Support	Tasking Support		Receive SGIs
	9:00 AM	Submit SGI	Submit SGI	Submit SGI	Submit SGI																Process SGIs
	9:15 AM																				
	9:30 AM																				
	9:45 AM	Deploy	Deploy	Deploy	Deploy																Approve SGIs
	10:00 AM	Rcv Flight Approval	Rcv Flight Approval	Rcv Flight Approval	Rcv Flight Approval																
	10:15 AM																				
	10:30 AM						Debrief Air Asset Requisition Process														
	10:45 AM					Test AeroDefense, ADS-B, & Flight Stream															
	11:00 AM					AR / Sunhillo stream start															
	11:15 AM	Report Readiness	Report Readiness	Report Readiness	Report Readiness		Observe Stream														
	11:30 AM					All others, stream start															
	11:45 AM																				
	12:00 PM																				
	12:15 PM						Move to KOBI to watch AlRanger Take Off (must be at the airport by 12:45pm to admitted to the flight line)														
	12:30 PM	Conduct Flights	Conduct Flights	Conduct Flights	Conduct Flights																
	12:45 PM																				
	1:00 PM						Observe Stream/Flights														
	1:15 PM																				
	1:30 PM																				
	1:45 PM																				
	2:00 PM	End of Ops	End of Ops	End of Ops	End of Ops	All streams stop	Move to KOBI for Debrief														
	2:15 PM	Demob to KOBI	Demob to KOBI	Demob to KOBI	Demob to KOBI	Meeting Signoff															
	2:30 PM																				
	2:45 PM																				
	3:00 PM	Drill Debrief	Drill Debrief	Drill Debrief	Drill Debrief		Drill Debrief	Drill Debrief	Drill Debrief		Drill Debrief	Drill Debrief	Drill Debrief	Drill Debrief	Drill Debrief	Drill Debrief	Drill Debrief	Drill Debrief	Drill Debrief	Drill Debrief	Drill Debrief
	3:15 PM																				
	3:30 PM																				
	3:45 PM																				
	4:00 PM																				
	4:15 PM	Open House	Open House	Open House	Open House		Open House	Open House	Open House		Open House	Open House	Open House	Open House	Open House	Open House	Open House	Open House	Open House	Open House	Open House
	4:30 PM																				
	4:45 PM																				
	5:00 PM																				

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SJ Emergency Response Drill
Observer Schedule

Wednesday, June 23rd, 2021

National Aviation Research and Technology Park
600 Aviation Reseach Blvd, Egg Harbor Township, NJ

8:00 AM	0800: All Hands Briefing
8:15 AM	
8:30 AM	Tasking Begins
8:45 AM	Observe Tasking & Air Asset Requisition Debrief
9:00 AM	
9:15 AM	
9:30 AM	
9:45 AM	
10:00 AM	
10:15 AM	
10:30 AM	
10:45 AM	View Live Data Feeds: Live Air Traffic Feed, Counter-Drone Dashboard, AiRanger, Water Utility, Salem OEM, AC/CMC OEM
11:00 AM	
11:15 AM	
11:30 AM	
11:45 AM	
12:00 PM	Transition to Woodbine. Arrive by 12:45 for AiRanger Take Off
12:15 PM	
12:30 PM	
12:45 PM	Pre-TakeOff Safety Briefing at KOBI
1:00 PM	Observe flights, lunch on your own, transition to KOBI in time for Debrief at 1500
1:15 PM	
1:30 PM	
1:45 PM	
2:00 PM	End of Ops.
2:15 PM	Tour Airport, Aero-Defense, SkyScape Hangar, Sunhillo ADS-B System
2:30 PM	
2:45 PM	
3:00 PM	Drill Debrief
3:15 PM	
3:30 PM	Open House
3:45 PM	
4:00 PM	
4:15 PM	
4:30 PM	
4:45 PM	
5:00 PM	

SJ Emergency Response Drill
Participant Schedule

Wednesday, June 23, 2021

7:00 AM	**Flight & Operations Teams Report to Woodbine Municpal Airport by 7:30 AM**	**Incident Command Participants: Report to NARTP Bldg 1 by 8:00AM**	
7:15 AM			
7:30 AM	0730: Flight Team Briefing - KOBI		
7:45 AM			
8:00 AM	0800: All Hands Briefing		
8:15 AM			
8:30 AM	0830: Tasking Begins		
8:45 AM	Receive Tasking	Prepare Forms 213RR and 220	
9:00 AM	Submit SGI	Receive SGIs	
9:15 AM	Mobilize for flight operations	Process SGIs	
9:30 AM			
9:45 AM		Approve SGIs	
10:00 AM	Receive SGI Flight Approval	Debrief Air Asset Requisition Process	
10:15 AM			
10:30 AM	Woodbine Teams Report Ready		
10:45 AM			
11:00 AM	AiRanger Take Off Aero-Defense Detection Initiate	Streaming Active: 1 - Live Air Traffic Feed 2 - Counter-Drone Dashboard 3 - Flight Feeds: - AiRanger - Water Utility - Salem OEM - AC / CMC OEM	View Feeds
11:15 AM	Field Teams Report Ready		
11:30 AM	Conduct Flights & Stream Content		
11:45 AM			
12:00 PM			Transition to Woodbine by 12:45 for AiRanger Take Off
12:15 PM			
12:30 PM			
12:45 PM			
1:00 PM			Observe flights, lunch on your own, transition to KOBI in time for Debrief at 1500
1:15 PM	AiRanger Take Off 2		
1:30 PM	Conduct Flights & Stream Content		
1:45 PM			
2:00 PM	End of Ops.		
2:15 PM	Demob to KOBI	Tour Airport, Aero-Defense, SkyScape Hangar, Sunhillo ADS-B System	
2:30 PM			
2:45 PM			
3:00 PM	Drill Debrief		
3:15 PM			
3:30 PM	Open House		
3:45 PM			
4:00 PM			
4:15 PM			
4:30 PM			
4:45 PM			
5:00 PM			

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Attachment 3 | ICS-213RR Form

RESOURCE REQUEST MESSAGE (ICS 213 RR)

1. Incident Name:				**2. Date/Time**		**3. Resource Request Number:**		
Requestor	**4. Order** (Use additional forms when requesting different resource sources of supply.):							
	Qty.	Kind	Type	Detailed Item Description: (Vital characteristics, brand, specs, experience, size, etc.)	Arrival Date and Time		Cost	
					Requested	Estimated		
	5. Requested Delivery/Reporting Location:							
	6. Suitable Substitutes and/or Suggested Sources:							
	7. Requested by Name/Position:			**8. Priority:** ☐ Urgent ☐ Routine ☐ Low		**9. Section Chief Approval:**		
Logistics	**10. Logistics Order Number:**					**11. Supplier Phone/Fax/Email:**		
	12. Name of Supplier/POC:							
	13. Notes:							
	14. Approval Signature of Auth Logistics Rep:					**15. Date/Time:**		
	16. Order placed by (check box): ☐ SPUL ☐ PROC							
Finance	**17. Reply/Comments from Finance:**							
	18. Finance Section Signature:					**19. Date/Time:**		
ICS 213 RR, Page 1								

AIR OPERATIONS SUMMARY (ICS 220)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:			3. Sunrise: Sunset:
4. Remarks (safety notes, hazards, air operations special equipment, etc.):	5. Ready Alert Aircraft: Medivac: New Incident:			6. Temporary Flight Restriction Number: Altitude: Center Point:
	8. Frequencies:	AM	FM	9. Fixed-Wing (category/kind/type, make/model, N#, base):
	Air/Air Fixed-Wing			Air Tactical Group Supervisor Aircraft:
7. Personnel: Name: Phone Number:	Air/Air Rotary-Wing – Flight Following			
Air Operations Branch Director	Air/Ground			
Air Support Group Supervisor	Command			Other Fixed-Wing Aircraft:
Air Tactical Group Supervisor	Deck Coordinator			
Helicopter Coordinator	Take-Off & Landing Coordinator			
Helibase Manager	Air Guard			

10. Helicopters (use additional sheets as necessary):

FAA N#	Category/Kind/Type	Make/Model	Base	Available	Start	Remarks

11. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 220, Page 1 Date/Time: _____

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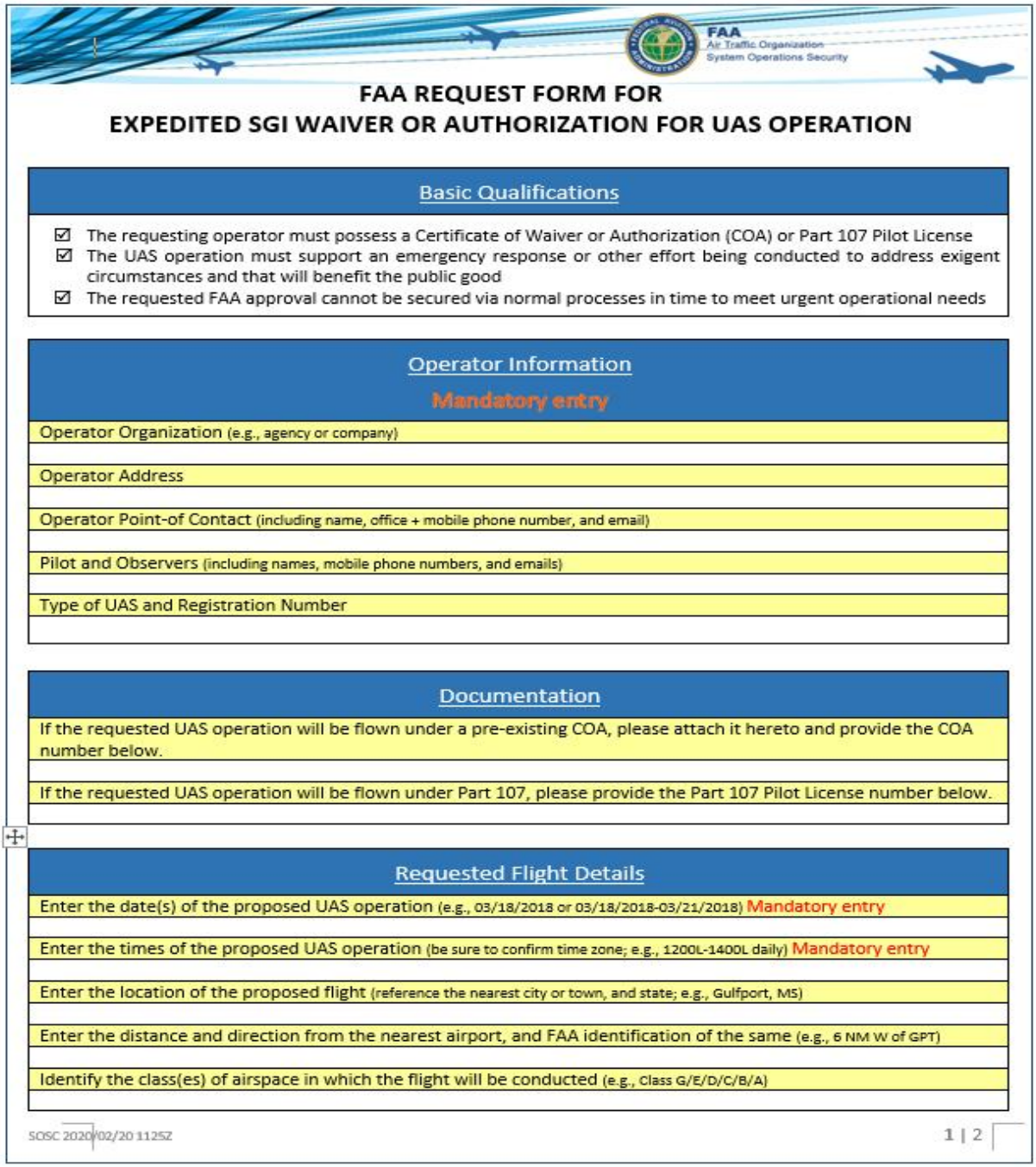
Attachment 5 | SGI Waiver Form



FAA
Air Traffic Organization
System Operations Security

FAA REQUEST FORM FOR EXPEDITED SGI WAIVER OR AUTHORIZATION FOR UAS OPERATION

Basic Qualifications
☑ The requesting operator must possess a Certificate of Waiver or Authorization (COA) or Part 107 Pilot License
☑ The UAS operation must support an emergency response or other effort being conducted to address exigent circumstances and that will benefit the public good
☑ The requested FAA approval cannot be secured via normal processes in time to meet urgent operational needs

Operator Information Mandatory entry
Operator Organization (e.g., agency or company)
Operator Address
Operator Point-of Contact (including name, office + mobile phone number, and email)
Pilot and Observers (including names, mobile phone numbers, and emails)
Type of UAS and Registration Number

Documentation
If the requested UAS operation will be flown under a pre-existing COA, please attach it hereto and provide the COA number below.
If the requested UAS operation will be flown under Part 107, please provide the Part 107 Pilot License number below.

Requested Flight Details
Enter the date(s) of the proposed UAS operation (e.g., 03/18/2018 or 03/18/2018-03/21/2018) Mandatory entry
Enter the times of the proposed UAS operation (be sure to confirm time zone; e.g., 1200L-1400L daily) Mandatory entry
Enter the location of the proposed flight (reference the nearest city or town, and state; e.g., Gulfport, MS)
Enter the distance and direction from the nearest airport, and FAA identification of the same (e.g., 6 NM W of GPT)
Identify the class(es) of airspace in which the flight will be conducted (e.g., Class G/E/D/C/B/A)

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1 | 2

Attachment 6 | Media Links

1. Test flights aim to demonstrate utility of drones in natural disasters.

   https://www.google.com/amp/s/pressofatlanticcity.com/news/local/test-flights-aim-to-demonstrate-utility-of-drones-in-natural-disasters/article_0b0fda5c-d438-11eb-a481-e741479ea2e3.amp.html

2. Unmanned Aircraft Innovators Complete Functional Drill to Enable Drone Integration into Emergency Response in NJ

   https://www.prnewswire.com/news-releases/unmanned-aircraft-innovators-complete-functional-drill-to-enable-drone-integration-into-emergency-response-in-nj-301318922.html

3. Drones Tested at the Jersey Shore to Help Provide Critical Info During Natural Disasters

   https://www.google.com/amp/s/www.nbcphiladelphia.com/news/tech/drones-tested-at-the-jersey-shore-to-help-provide-critical-info-during-hurricane-season/2857847/%3Famp

4. NJ Emergency Response Drill Video Promo courtesy of National Aerospace Research & Technology Park (NARTP)

   a. https://www.youtube.com/watch?v=zrUVRYQc1nc
   b. https://www.nartp.com/drones/

5. American Aerospace Announcement:

   a. UAS Innovators Complete Functional Drill to Enable Drone Integration into Emergency Response: https://www.americanaerospace.com/post/uas-innovators-complete-functional-drill-to-enable-drone-integration-into-emergency-response
   b. Unmanned Autonomous Aviation Systems as a Post Disaster, Human-Capital Force Multiplier: https://www.americanaerospace.com/post/unmanned-autonomous-aviation-systems-as-a-post_disaster-human-capital-force-multiplier
   c. AATI & Verizon to Continue Airborne LTE Tests - Week of June 19th: https://www.youtube.com/watch?v=npGVqYicltU&t=56s
   d. AATI, Verizon, & Cape May County Successfully Test Airborne LTE | June 20, 2017 Exercise: https://www.youtube.com/watch?v=4D4ZwheoFro

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