

Developing a Counter Unmanned Aircraft Surveillance Program



Bexar County Office of Emergency Management

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Welcome!

This presentation is provided to foster a greater understanding of Developing a Counter Unmanned Aircraft Surveillance Program.

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Introduction



The potential for unmanned aircraft to be utilized to conduct surveillance or interfere with emergency responders on disaster or emergency operations is a growing concern. With FAA regulations limiting how local jurisdictions can react to unauthorized unmanned aircraft surveillance, it is important to have a plan or program in place for addressing this issue. This workshop is designed to provide a concept for how local jurisdictions can begin planning to develop a counter unmanned aircraft surveillance program.

Workshop Content



Objectives

- Vigilance is the first step in developing a counter unmanned aircraft surveillance program
- Counter surveillance to detect the location of the remote operator is the second step
- Interdiction of the remote operator and utilization of current statutes for the issuance of citations or possibly arrest for violations of State laws is the third step

Objective 1: Vigilance

Vigilance is defined as = the action or state of keeping careful watch for possible dangers or difficulties.

Disaster and emergency operations require that we remain vigilant for a myriad of potential dangers.

Being vigilant for unauthorized unmanned aircraft is merely an extension of what we should already be doing in the field by keeping 360 degree observations.



Vigilance includes Knowing the Basics

- Visual-line-of-sight ONLY unaided by any device other than corrective lenses (glasses or contacts)
- May not operate over people not directly participating in the operation
- Daylight ONLY operations; Civil Twilight = 30 minutes before official sunrise or 30 minutes after official sunset
- No person may act as a pilot in command or VO for more than one SUAS at a time
- No operations from a moving aircraft
- No operation from a moving vehicle unless the operation is in a sparsely populated area and may not be the vehicle driver
- May not operate with a blood alcohol level of 0.04 or if you have consumed alcohol in the past 8 hours

The Basics





Unit 7: Texas Laws for SUAS

Texas Government Code, Chapter 423 Use of Unmanned Aircraft

1. Sec. 423.003 Offense: Illegal Use of Unmanned Aircraft to Capture Image
 - (a) Class C Misdemeanor
2. Section 423.004 Offense: Possession, Disclosure, Display, Distribution, or Use of Image
 - (a) Class B Misdemeanor
3. Sec. 423.0045 Offense: Operation of Unmanned Aircraft over Correctional Facility, Detention Facility, or Critical Infrastructure Facility (an exhaustive list of CI/KR)
 - (a) Class B Misdemeanor, except that the offense is a Class A Misdemeanor if the actor has previously been convicted
4. Sec. 423.0046 Offense: Operation of Unmanned Aircraft over Sports Venue
 - (a) Seating capacity of 30,000 or more people; and
 - (b) Primarily used for one or more professional or amateur sports or athletic events
 - (c) Class B Misdemeanor, except that the offense is a Class A Misdemeanor if the actor has previously been convicted

Dangers in the Sky

Unauthorized unmanned aircraft interfering with disaster or emergency operations is not a trivial matter.

These rogue aircraft create dangers to the public, the responders, and to manned aircraft.

They are dangerous and are capable of causing serious injury to individuals and can cause manned aircraft to have to take emergency procedures to avoid damage to aircraft engines and potential crashes resulting in mass fatalities.

These are not merely flying toys!



Establishing a Temporary Flight Restriction

Recognizing that unauthorized unmanned aircraft can be a hazard during disaster or emergency operations, we can request a Temporary Flight Restriction (TFR) from the FAA.



- Notify the Houston Center at 281-230-5560
- When you call requesting a TFR you will need the following information: (Without this information; they cannot process a TFR)
- Latitude & Longitude of the location in degrees/minutes/seconds
- Requests are normally for 1 ½ mile radius and an altitude of 1,000 to 1,500 ft
- Duration that you are requesting for the TFR
- The name and contact information for the on-scene Incident Commander or POC who will be in charge of the air space

Objective 2: Counter Surveillance

Counter Surveillance is defined as = measures undertaken to prevent surveillance.

Counter surveillance extends beyond simply being vigilant. This is the point where we take actions to begin to ascertain who the unauthorized pilot is and where that person is located.

Once we observe an unauthorized unmanned aircraft, there are several actions we can take to locate the unauthorized pilot.



This is **Surveilling** Them!

Counter Surveillance Measures

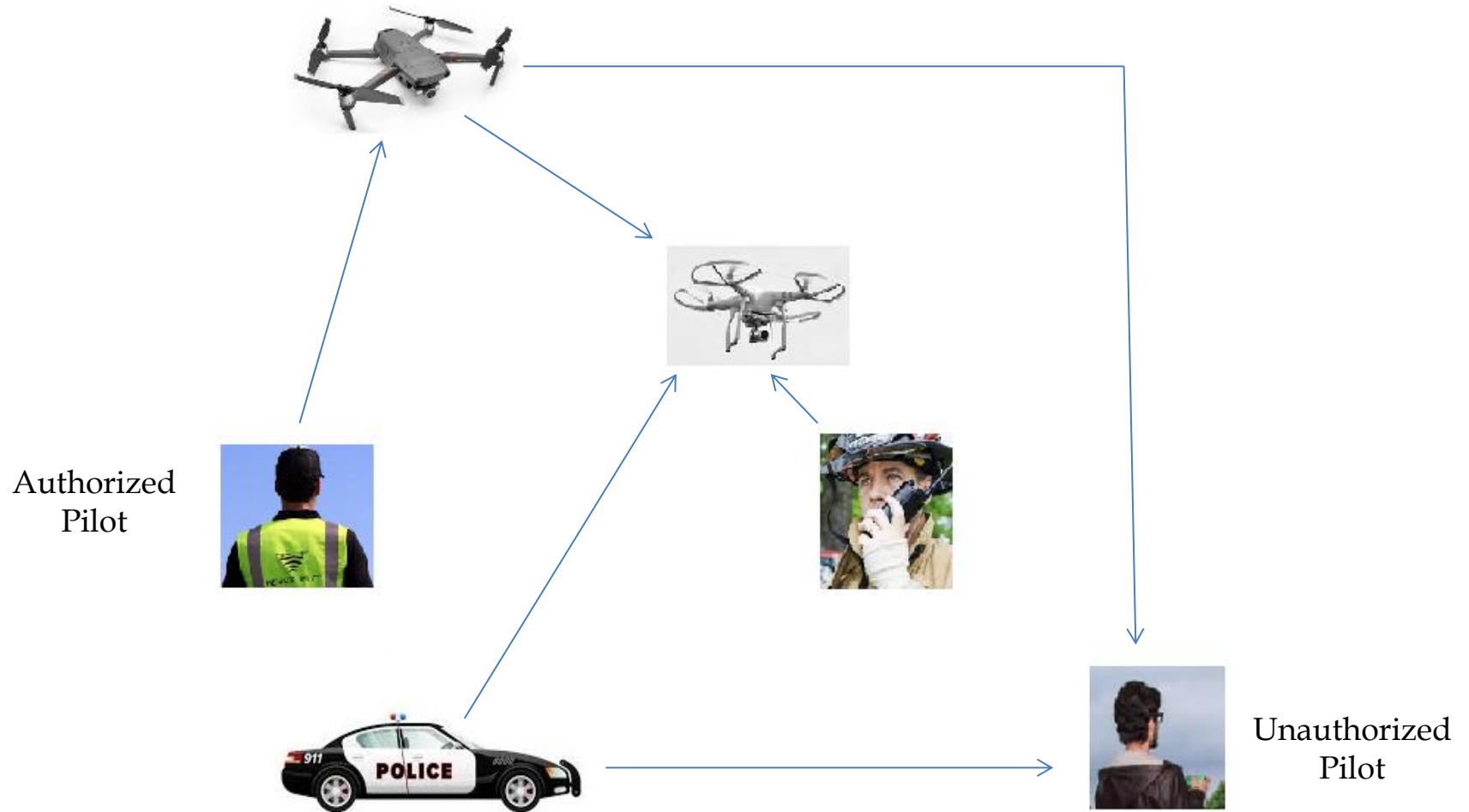
If you understand that the average unmanned aircraft has a battery life of 20 to 30 minutes of flight time, you also understand that the remote pilot cannot be all that far away.

Ground Surveillance: Responders on the ground can report the location of unmanned aircraft and law enforcement can be advised to sweep the nearby area for the remote pilot.

Aerial Surveillance: If your agency has an unmanned aircraft, you can have your agency remote pilot fly an over-watch pattern above the unauthorized aircraft and follow it to the location of the unauthorized pilot.

Combination Ground & Aerial Surveillance: By combining these two approaches we greatly increase the likelihood of locating the unauthorized remote pilot.

Counter Surveillance Diagram



FAA Law Enforcement Checklist

The FAA developed the following acronym for their checklist for law enforcement:

Detect unauthorized drones

Report the incident

The Law Enforcement Assistance Program (LEAP) phone number for Texas is 817-222-5006.

Observe the drone and keep visibility

Notice identifying features

Execute appropriate police action



Objective 3: Interdiction



Interdiction is defined as = the action of prohibiting or preventing an unauthorized person or activity.

So, we see the unauthorized unmanned aircraft flying around and we see who is flying it, maybe they won't do it again if we wag our finger at them.



A person is more likely to repeat an unauthorized act and to be emboldened by our lack of response!



Shooting Down or Jamming



Under 18 USC 32 shooting down a drone is a Federal crime. It is a felony to damage or destroy an aircraft.

Additionally, electronic jamming of unmanned aircraft is illegal for civilians to operate and can result in a \$20,000 fine and jail time. There are a few Federal agencies under the Department of Homeland Security that are authorized to utilize electronic jamming.

The major problem is that by shooting an unmanned aircraft you can cause it to have an uncontrolled fly-away and injure someone or damage property.

And, since unmanned aircraft operate on frequencies in the cell phone band, jamming will interrupt more than just the unmanned aircraft, possibly emergency communication.

FBI: Drone Pilots Charged for Flying During Super Bowl

FBI officials have confiscated a half dozen unauthorized drones being flown around the Mercedes-Benz Stadium ahead of the Super Bowl.

One Florida man, Ramos Teran, faces up to one year in prison if convicted for the charges he is facing for violating a temporary flight restriction.

The Federal government is starting to take a stronger response posture to unmanned aircraft because these unauthorized flights are proving to be a danger to lives. Expect the Federal response to become increasing restrictive and punitive!



Enforce State Criminal Statutes on the Books

People learn that they can't shoot down or jam an unmanned aircraft and they assume that we are without the ability to do anything and that is the farthest from the truth.

We have Texas Government Code Chapter 423, which I previously showed you statutes which are enforceable.

But, do not overlook the vast entirety of all other State Statutes.



Depending upon the situation, something as simple as Texas Penal Code § 38.15. Interference with Public Duties.

But, this is the important part of developing an interdiction posture; you will have to meet with your District Attorney's Office and come up with plan for what they will and won't accept for filing.

What does the Future Hold?

We honestly don't know what will come tomorrow.

However, in the State of Texas, we are already looking to make changes to our existing laws concerning unmanned aircraft.

I am one of the individuals serving on the HB2340 Committee charged with providing the Texas Representatives with recommendations to Texas laws. We will be reporting our findings before November.

Changes will probably occur at the Federal level as well in the near future.





1. Development of a Counter Unmanned Aircraft Surveillance Program begins with our Vigilance.
2. Once we have detected unmanned aircraft we must take counter surveillance actions.
3. Finally, we won't make any real difference if we don't make interdiction a meaningful part of our program.

Questions and Answers?

We will now be transitioning to the hands on “flight time” portion of the training.



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