

# Civil Air Patrol



## New and Future Operational Missions

**John "Moose" Desmarais**  
**Director of Operations**

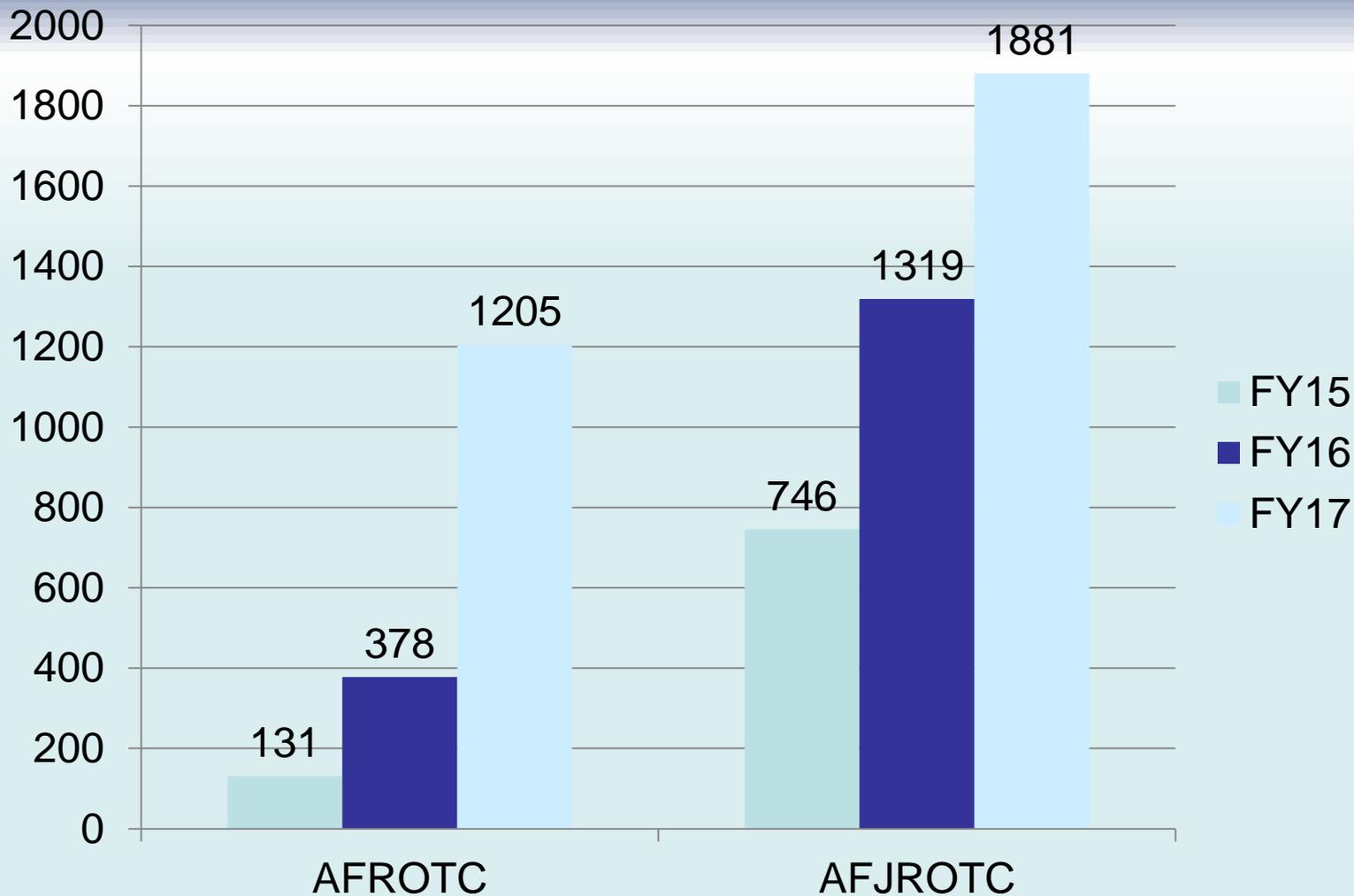


# Powered Flying FY16 vs FY17 as of 24 August

AFAM Mission Types	FY16	FY17	% Difference	% Goal	Status
AFROTC	126	481	281%	241%	
Range Support	301	809	169%	231%	
AFJROTC	443	677	53%	135%	
DSCA / DR	1,054	1,605	52%	107%	
Other / HLS	5,427	6,349	17%	98%	
Air Defense	1,217	1,319	8%	94%	
SUAS	1,063	1,140	7%	88%	
SAR	1,544	1,615	5%	95%	
Cadet Orientation	9,433	9,515	1%	84%	
Maintenance	7,965	7,955	0%	94%	
Route Survey	634	577	-9%	77%	
Training	33,118	26,975	-19%	67%	
Drug Interdiction	7,564	4,959	-34%	62%	
<b>AFAM Total</b>	<b>69,889</b>	<b>63,979</b>	<b>-9%</b>	<b>78%</b>	
<b>Liaison Flying</b>	<b>2,113</b>	<b>1,740</b>	<b>-18%</b>	<b>70%</b>	
<b>Corporate Flying</b>	<b>20,060</b>	<b>21,403</b>	<b>7%</b>	<b>93%</b>	
<b>Total Flying</b>	<b>92,062</b>	<b>87,122</b>	<b>-5%</b>	<b>81%</b>	



# AFROTC & AFJROTC Cadets Flown





# Search & Rescue



- Missions are changing, but definitely not going away
- CAP is credited with saving 105 lives this FY; 101 with cell forensics or radar analysis support



0902 EDT 28-Aug



0907 EDT 28-Aug

1 Save credited for assisting the USCG on 28 August

FOR CAP-NRAT APPROVED USE ONLY



(H) Track Id: 18429873

Track Id	18429873
Callsign	
Mode 3/A	2530
Time	22:08:15 GMT
Latitude	29° 29' 06 N
Longitude	95° 09' 53 W
Altitude	10400 (ft)
Heading	124°
Speed	256 (kts)
Rate of Climb	2817 (ft/min)
Coast Count	0

(S) Track Id: 18429873

Track Id	18429873
Callsign	
Mode 3/A	2530
Time	22:39:08 GMT
Latitude	26° 30' 43 N
Longitude	92° 37' 31 W
Altitude	41100 (ft)
Heading	149°
Speed	448 (kts)
Rate of Climb	-13 (ft/min)
Coast Count	0

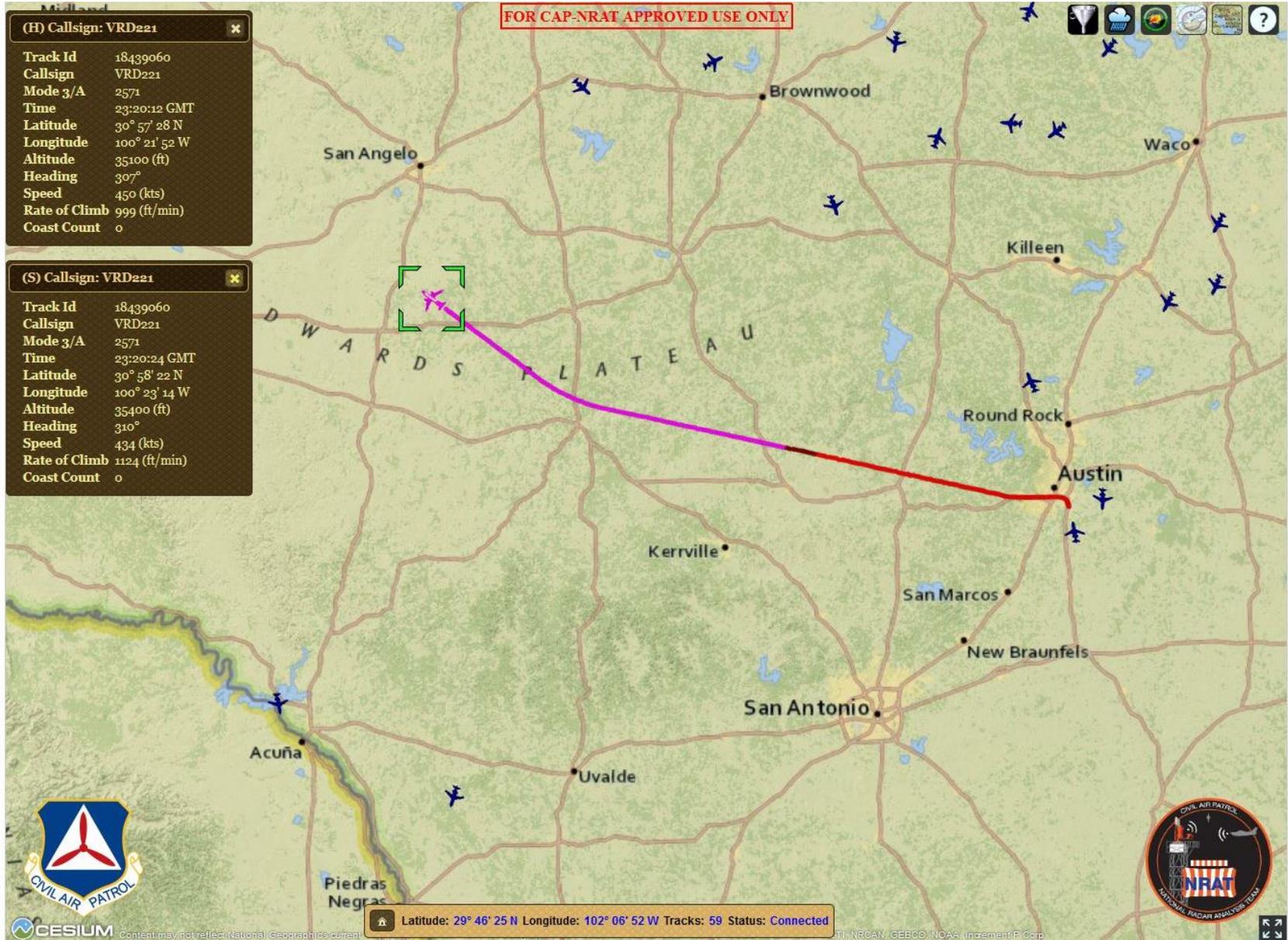


# Tools Expanding Beyond SAR



Latitude: 32° 39' 32 N Longitude: 102° 01' 06 W Tracks: 66 Status: Connected

# Mission Sandbox – Tracking Aircraft





# Disaster Relief Operations



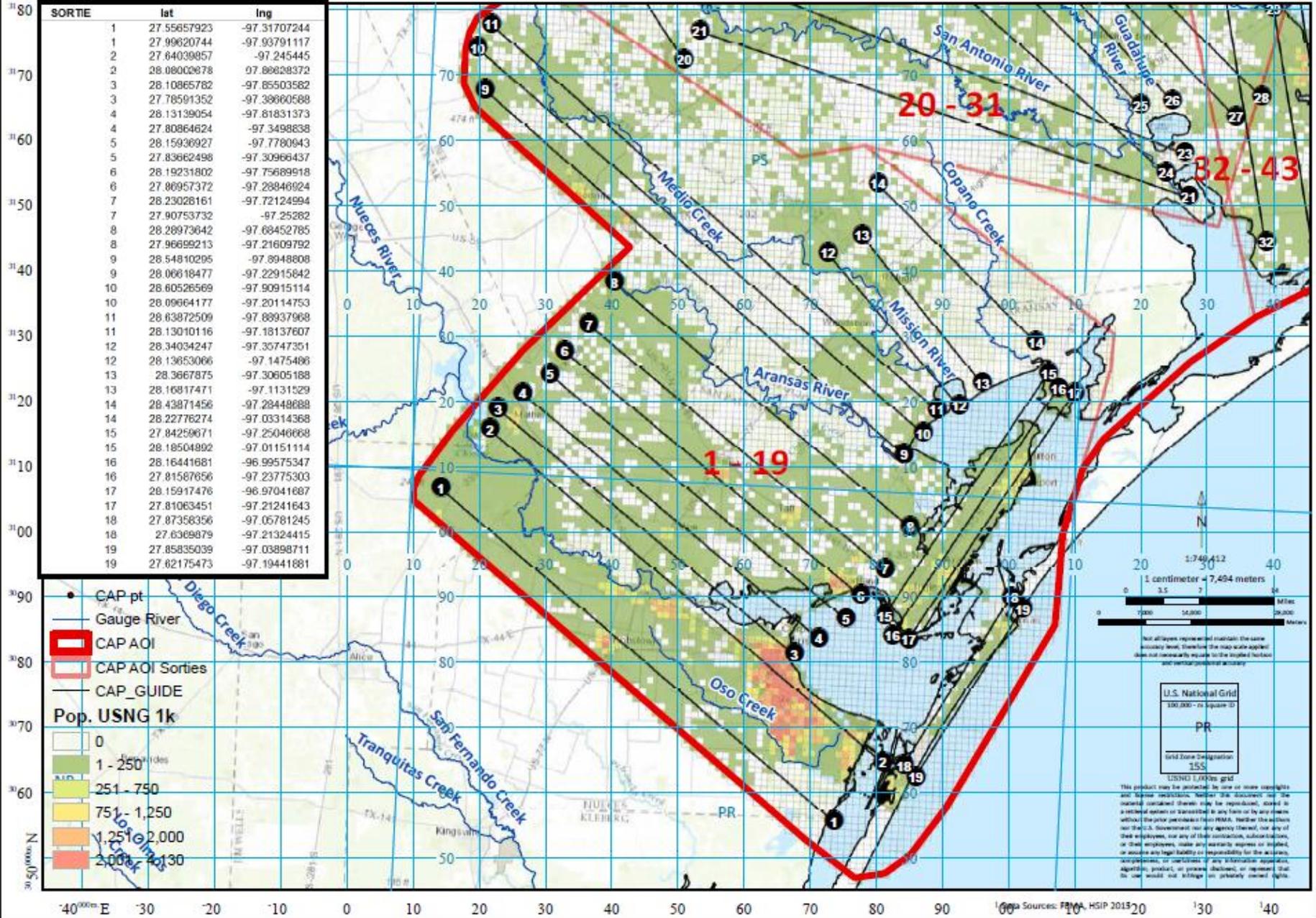
- This has been a busy year for disasters 62 missions with 3 more pending
- Would not be surprised to see 500+ hours flown in support of Hurricane Harvey Operations
- Continuing to refine our toolkit and maintain or develop relationships for joint operations



# Hurricane Harvey - CAP GUIDANCE Sortie 1 - 19: (26 August 2017, 0800 EST)

State of Texas

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SORTIE	lat	lng
1	27.55657923	-97.31707244
1	27.99620744	-97.93791117
2	27.64039857	-97.245445
2	28.08002878	97.88828372
3	28.10865782	-97.85503582
3	27.78591352	-97.38860588
4	28.13139054	-97.81831373
4	27.80864624	-97.3498838
5	28.15936927	-97.7780943
5	27.83662498	-97.30966437
6	28.19231802	-97.75689918
6	27.80957372	-97.28848924
7	28.23028161	-97.72124994
7	27.90753732	-97.25282
8	28.28973642	-97.68452785
8	27.96699213	-97.21609792
9	28.54810295	-97.8948808
9	28.06618477	-97.22915842
10	28.80526569	-97.90915114
10	28.0964177	-97.20114753
11	28.63872509	-97.88937968
11	28.13010116	-97.18137607
12	28.34034247	-97.30747351
12	28.13653066	-97.1475486
13	28.3667875	-97.30605188
13	28.16817471	-97.1131529
14	28.43871456	-97.28448688
14	28.22776274	-97.03314368
15	27.84259671	-97.25048668
15	28.18504892	-97.01151114
16	28.16441681	-96.99575347
16	27.81587856	-97.23775303
17	28.15917476	-96.97041687
17	27.81063451	-97.21241643
18	27.87358356	-97.05781245
18	27.6369879	-97.21324415
19	27.85835039	-97.03898711
19	27.62175473	-97.19441881

- CAP pt
- Gauge River
- ▭ CAP AOI
- ▭ CAP AOI Sorties
- CAP\_GUIDE
- Pop. USNG 1k
- 0
- 1 - 250
- 251 - 750
- 751 - 1,250
- 1,251 - 2,000
- 2,001 - 4,130

1:749,412  
1 centimeter = 7,494 meters

0 20 30 40 Miles  
0 7000 50000 200000 Meters

Not all states represented maintain the same accuracy level. Therefore the map scale applied does not necessarily equate to the implied horizontal and vertical positional accuracy.

U.S. National Grid  
PR  
Grid Zone Designation  
15S

USNG 1,000m grid  
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# SUAS Program



## 2 Cessna 182Qs

- Supporting 19 exercises a year
  - 9 GFE
  - 9 GFW
  - Emerald Warrior
- Flying about 1,300 hours



## 1 Cessna T206H



# RPA Escort Program

- **Flying 4 to 6 days a week out of Syracuse, NY supporting 108 ATKS**
  - **1,122 total hours flown (966 this FY)**
  - **CAP has directly supported the qualifying of over 130 MQ-9 Reaper students**
- **Requests from sister units in Fargo, ND and Ellington, TX are expected to start operations in the second quarter of FY18**
- **Anticipate these missions lasting a year or longer**





# Inexpensive Mini UAV Applications for CAP



Imagery collected is then merged  
into a mosaic for GIS use





# Mini UAV Concepts

- CAP is taking a multi-tiered system approach
  - Higher end imagery collection systems
  - COTS products like DJI 3 & 4s
  - Small fixed wing systems
- Operate under FAA Part 107 Rules Primarily
- Will review options of waivers for night and BLOS once we have more experience
- Expect to release a regulation for top level program management for review in September with implementation by the end of 2017



# Mini-UAV Operating Locations

- 9 Units/Wings Currently
- Expanding to another 15 this fall/winter
- Goal is for every wing by 2020 if not sooner





# Hexacopters

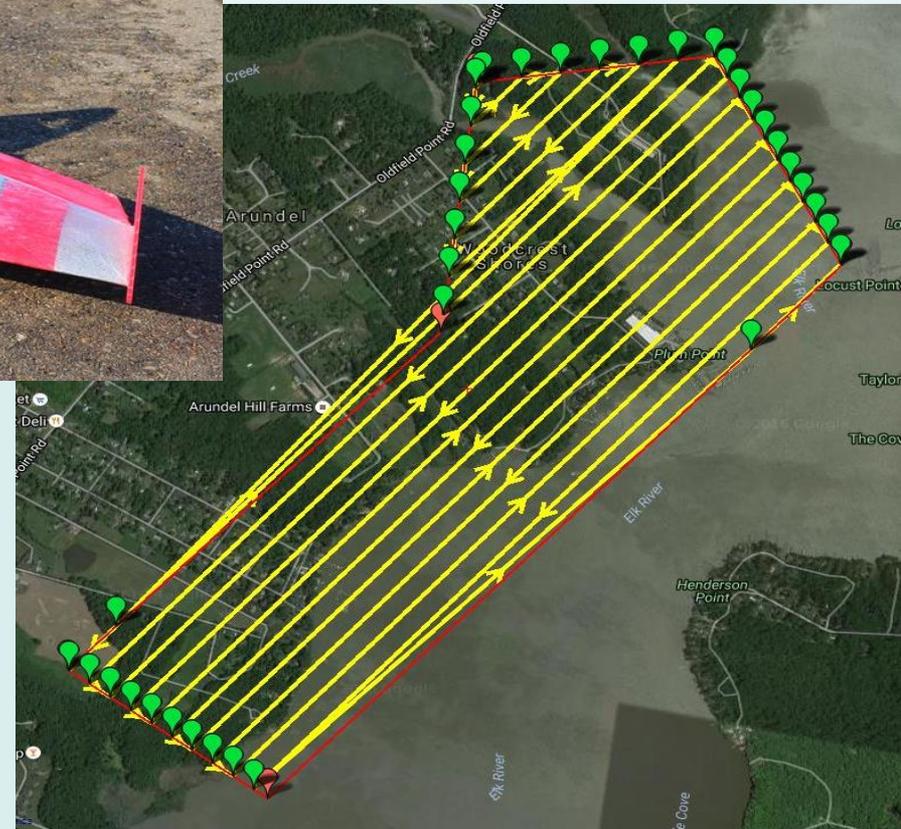


12 Minutes = .25 Square Kilometers



# Fixed Wing Test

60 Minutes = 2.5 Square Kilometers





# QUESTIONS?