

# Back to Basics

## Airspace

# 90 Minutes

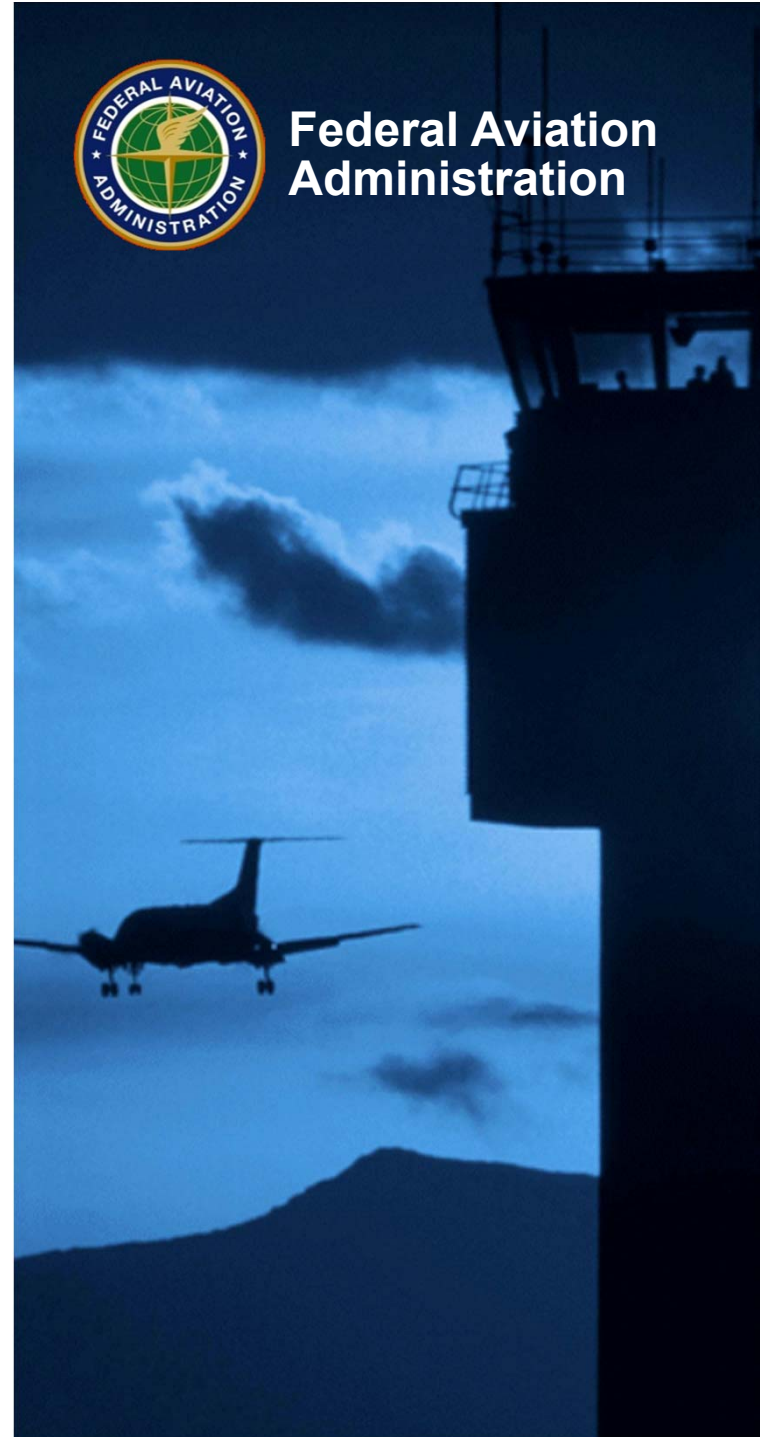
Presented to: On-Line Audience

By: Stephen K. Brown & John Wood

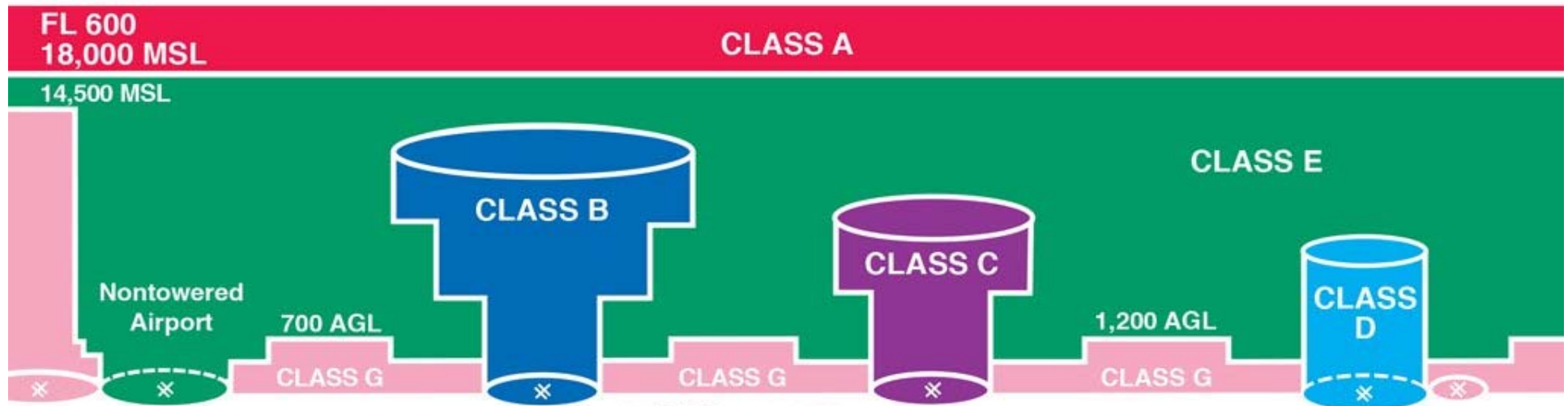
Date: June 2019



**Federal Aviation  
Administration**



# U.S. Airspace Classes at a Glance



14 CFR Part 91.155

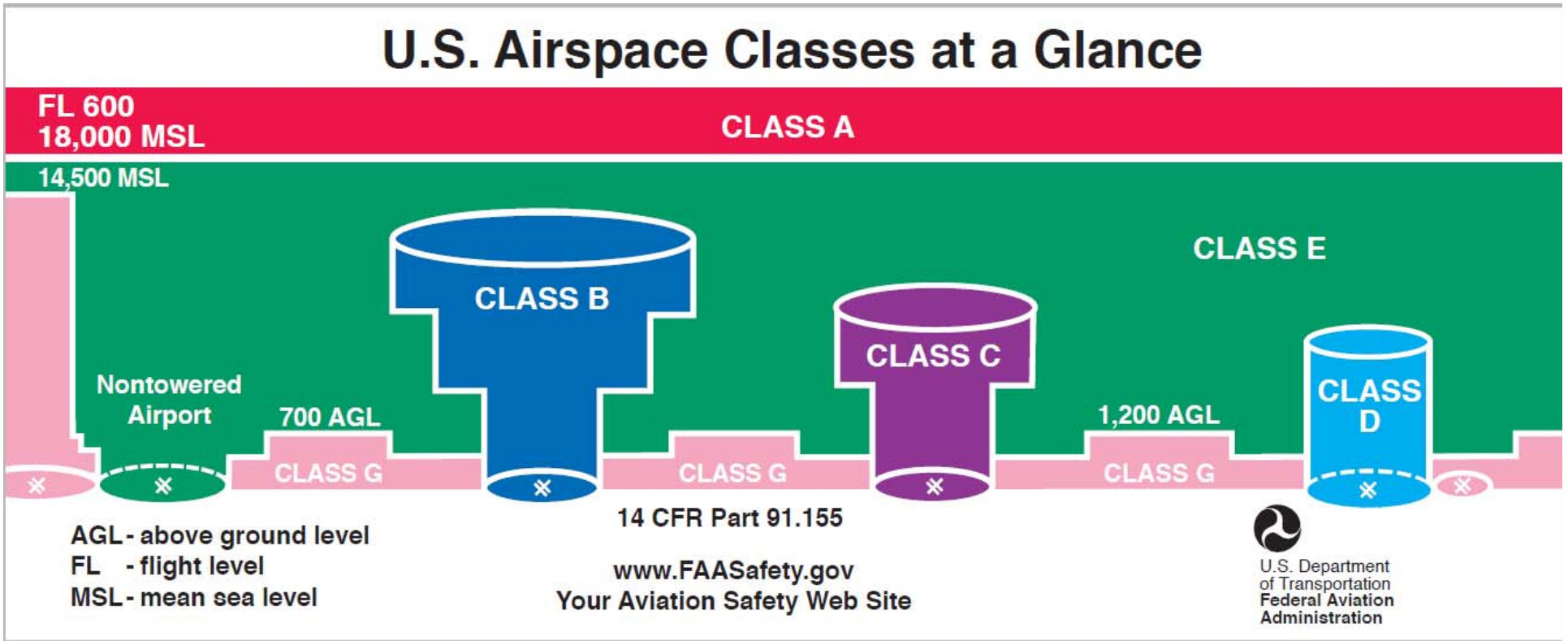
Airspace Class	Entry Requirement	Pilot Certificate or Rating	Two-Way Communication	Altitude Decoding Transponder	VFR Min. Visibility Below 10,000 MSL	VFR Min. Visibility 10,000 MSL and Above	VFR Cloud Clearance Below 10,000 MSL	VFR Cloud Clearance 10,000 MSL and Above
<b>A</b>	ATC Clearance	Instrument	Yes	Yes	N/A	N/A	N/A	N/A
<b>B</b>	ATC Clearance	Private Certificate or student with endorsement	Yes	Yes within 30 nm of the class B primary airport <sup>1</sup>	3 miles	3 miles	Clear of Clouds	Clear of Clouds
<b>C</b>	VFR: Radio Contact IFR: Clearance	Student Certificate	Yes	Yes within C space and above lateral limits of C space <sup>1</sup>	3 miles	3 miles	500 below 1,000 above 2,000 horizontal	500 below 1,000 above 2,000 horizontal
<b>D</b>	VFR: Radio Contact IFR: Clearance	Student Certificate	Yes	No unless required by other airspace	3 miles	3 miles	500 below 1,000 above 2,000 horizontal	500 below 1,000 above 2,000 horizontal
<b>E</b>	VFR: None IFR: Clearance	Student Certificate	IFR only	No unless required by other airspace	3 miles	5 miles	500 below 1,000 above 2,000 horizontal	1,000 below 1,000 above 1 mile horizontal
<b>G</b>	None	Student Certificate	No	No unless required by other airspace	Day: 1 mile Night: 3 miles	5 miles <sup>2</sup>	500 below 1,000 above 2,000 horizontal } <sup>2</sup>	1,000 below 1,000 above 1 mile horizontal } <sup>2</sup>

<sup>1</sup> An altitude decoding transponder is required above 10,000 MSL.

<sup>2</sup> When flying 1,200 AGL or below: DAY: 1 mile visibility clear of clouds; NIGHT: 3 miles visibility, 500 below, 1,000 above, 2,000 horizontal.

\*\*\* AGL = above ground level | FL = flight level | MSL = mean sea level \*\*\*

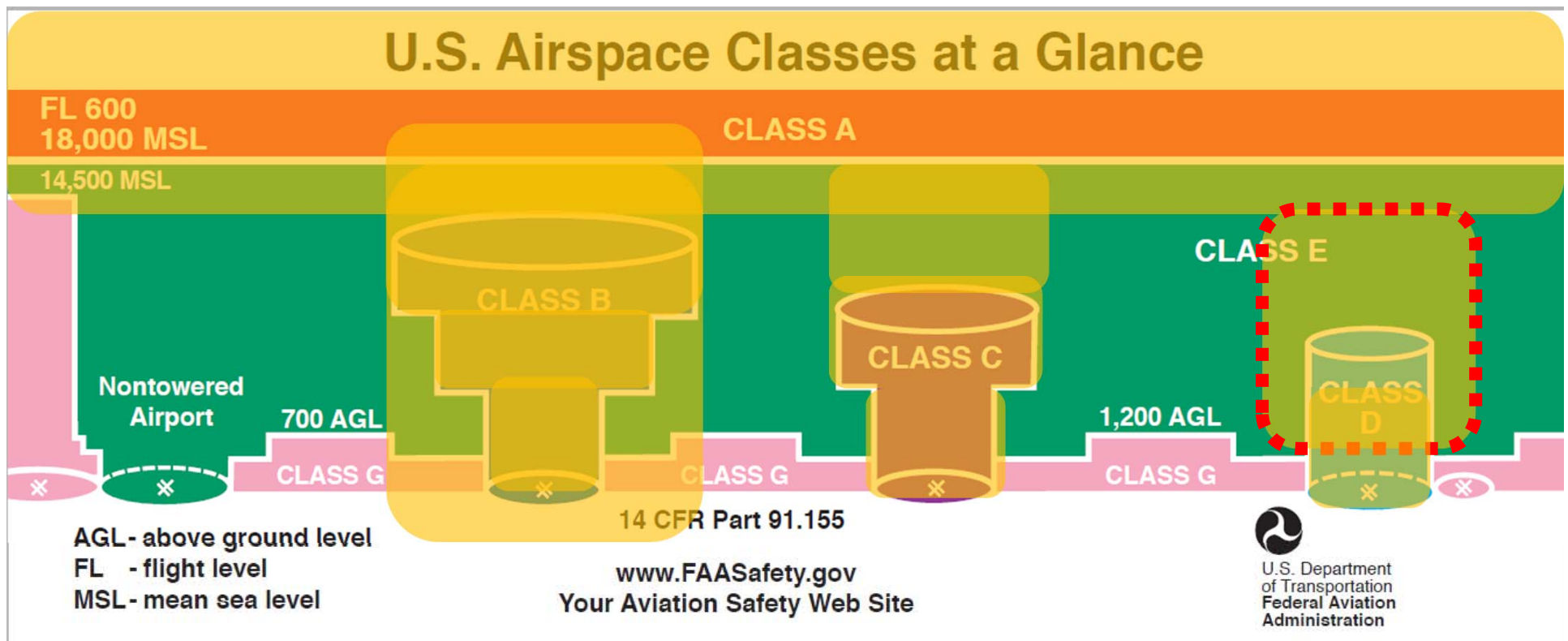
# “Basic” Airspace



# Mode C Transponder...\*

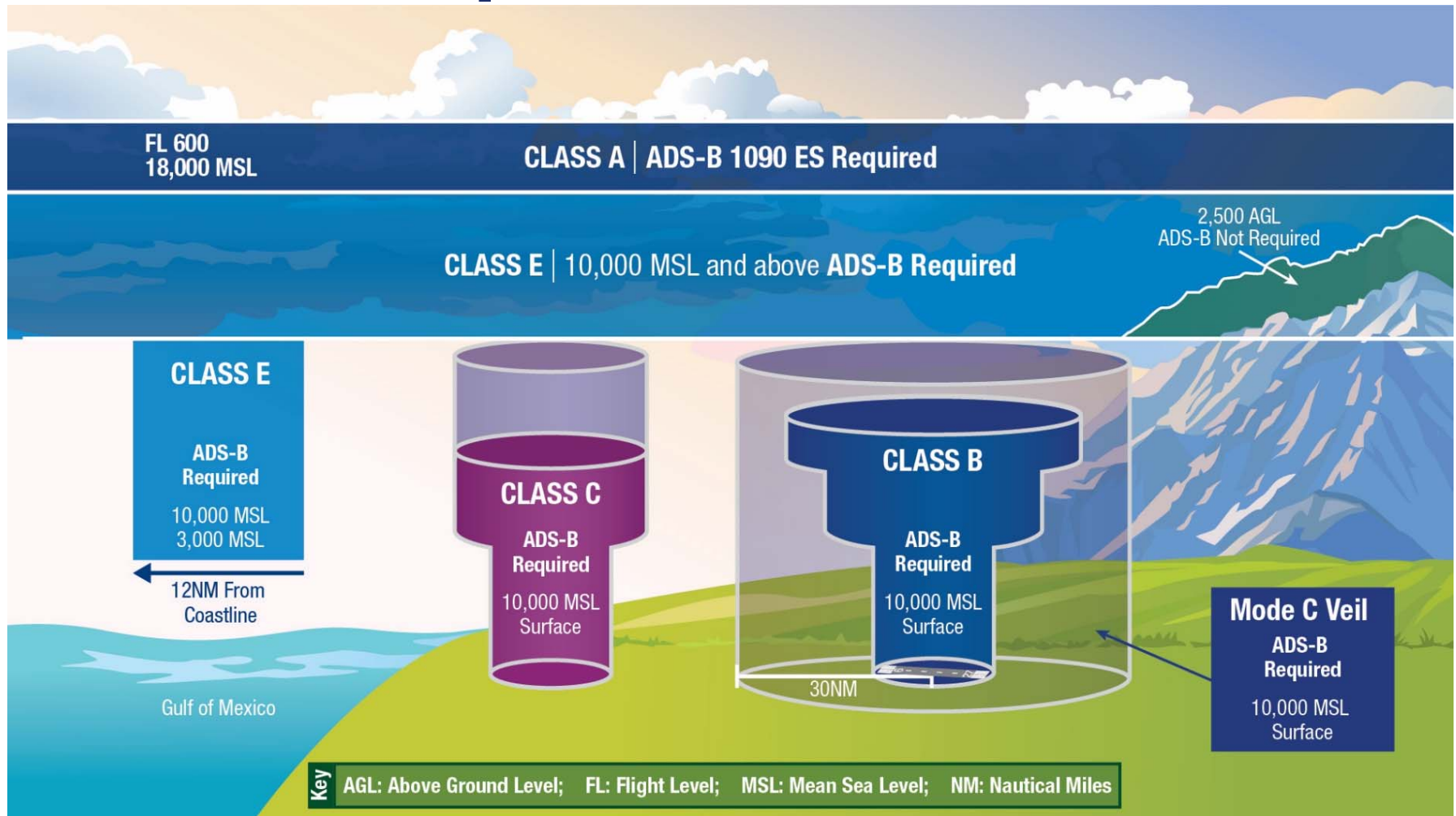
- 10,000MSL (2500)
- In & Above Class C
- In & Above Class B
- Mode C Veil

10 Mile of Airport – App D, 1200 AGL to 10,000 MSL

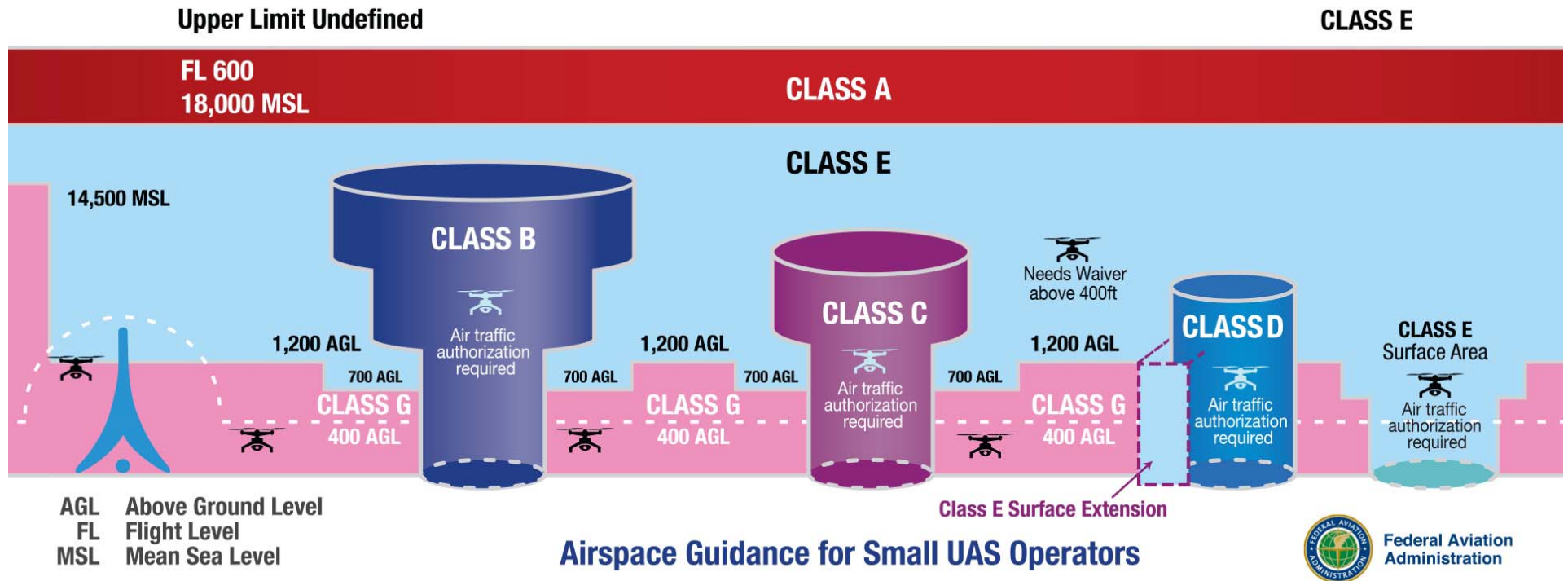




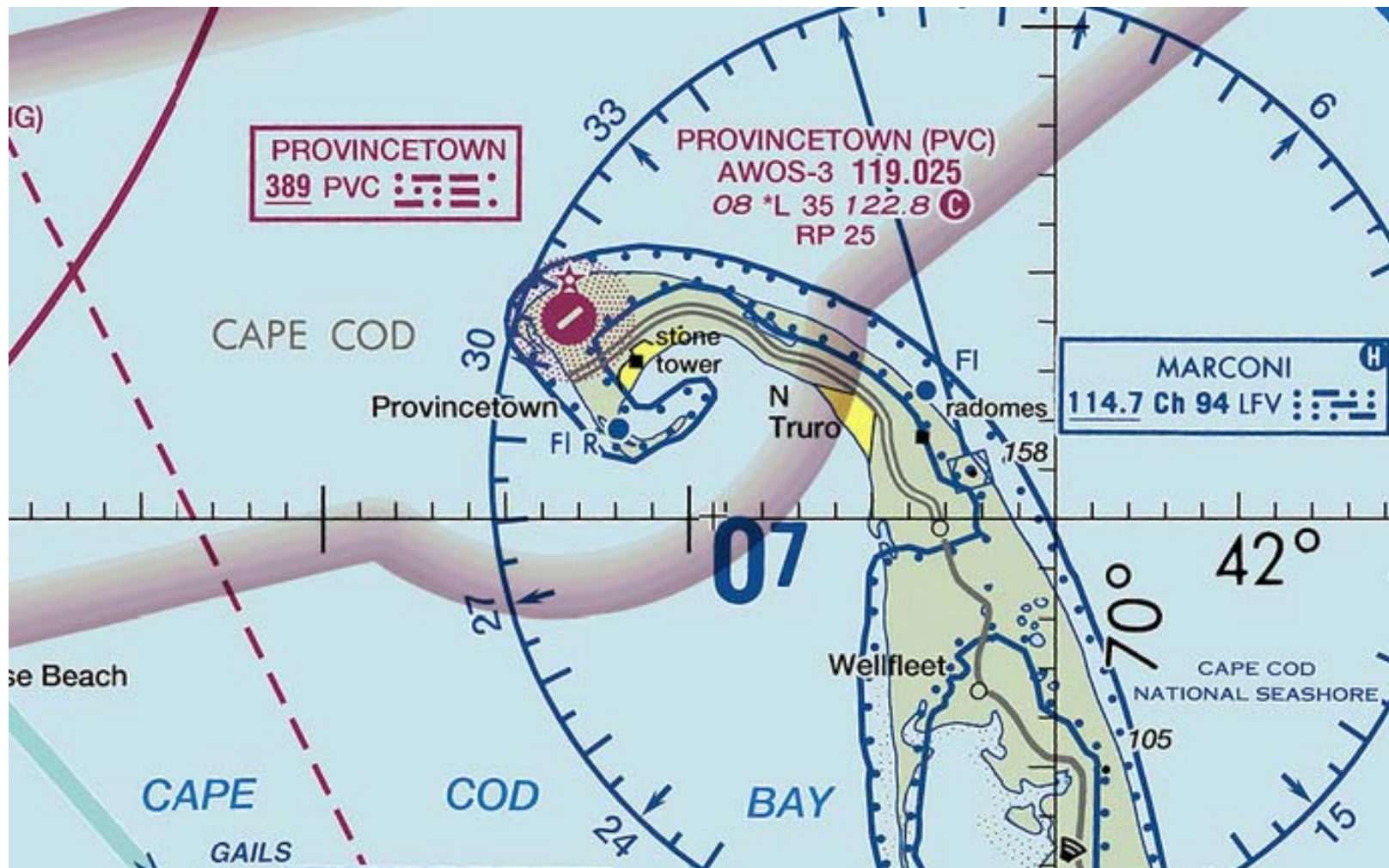
# ADS-B Airspace



# UAS Airspace Card



# Provincetown, MA (KPVC)



# What airspace would you be in if you could climb vertically from the surface up to 75,000?

- A. Class E up to 700 AGL, Class G from 700 AGL up to 18,000 MSL, Class A from 18,000 to & include FL600, Class G above FL600
- B. Class G up to 700 MSL, Class B up to 14,500 MSL, Class A from 14,500 to & include FL600, Class G above FL600
- C. Class G up to 700 AGL, Class E from 700 AGL up to 18,000 MSL, Class A from 18,000 to & include FL600, Class E above FL600
- D. Class F up to 2000 AGL, Class E from 2000 AGL up to 18,000 MSL, Class A from 18,000 to & include FL600, Class E above FL600
- E. Class E up to 1200 AGL, Class G up to 14,500 MSL, Class A from 14,500 to & include FL600, Class G above FL600





# What airspace are you in and what are the VFR Minimums?

- A. Class E - 3 sm, 1,000' above, 500' below & 2,000' horizontally
- B. Class G - 1 sm, 1,000' above, 500' below & 2,000' horizontally
- C. Class G - 3 nm, 1,000' above, 500' below & 2,000' horizontally
- D. Class G - 1 sm, Clear of Clouds
- E. Class E – 5 sm, 1,000' above, 1000' below & 1sm horizontally

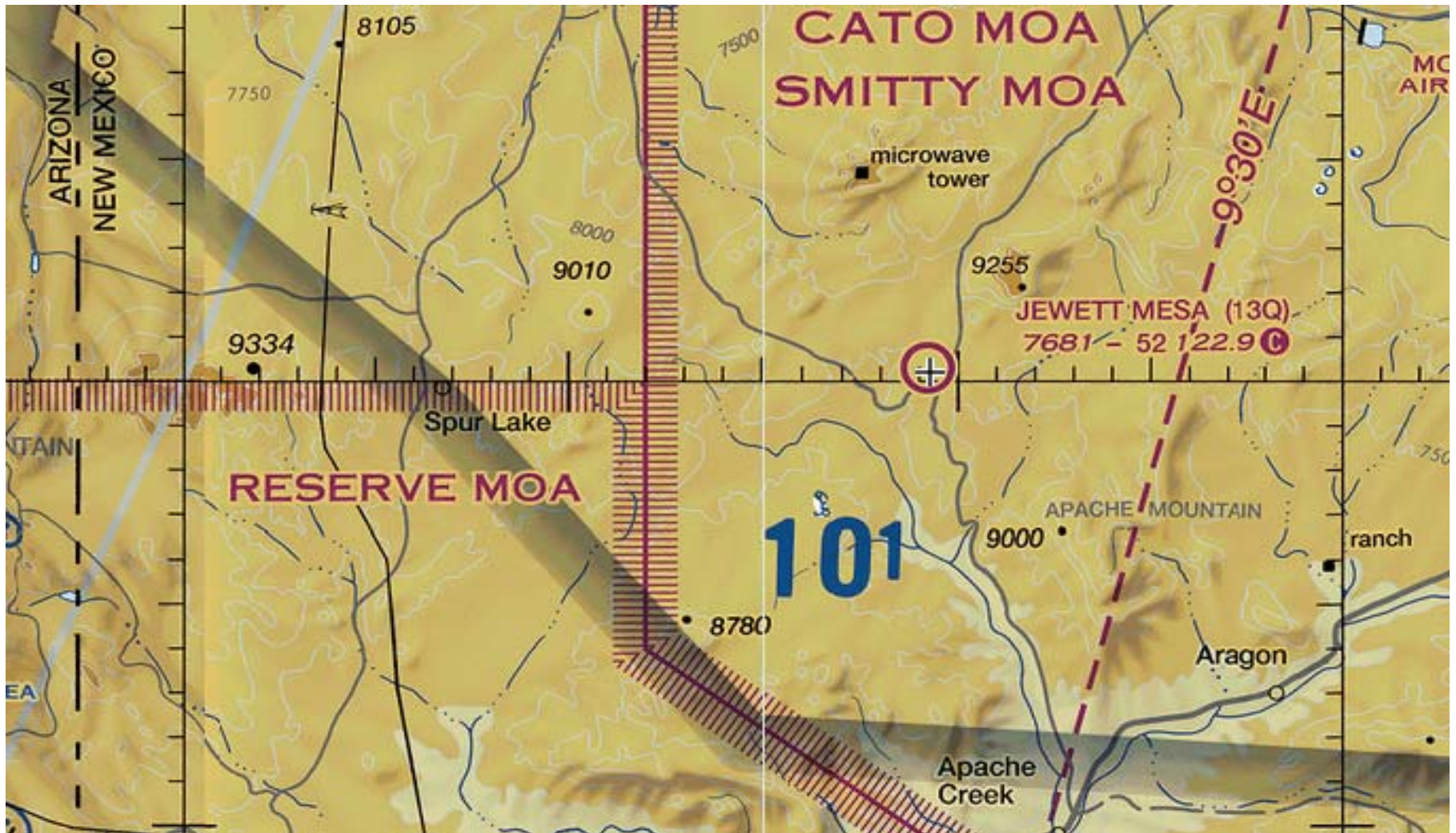


# What is your Traffic Pattern Altitude, Airspace and what are the VFR Minimums?

- A. 1,000'; Class E - 3 sm, 1,000' above, 500' below & 2,000' horizontally
- B. 1,500'; Class G - 1 sm, 1,000' above, 500' below & 2,000' horizontally
- C. 500'; Class G - 3 nm, 1,000' above, 500' below & 2,000' horizontally
- D. 500'; Class G - 1 sm, Clear of Clouds
- E. 1,000; Class E – 5 sm, 1,000' above, 1000' below & 1sm horizontally



# Jewett Mesa (13Q)



# What airspace would you be in if you could climb vertically from the surface up to 75,000?

- A. Class E up to 1200 AGL, Class G from 1200 AGL up to 18,000 MSL, Class A from 18,000 to & include FL600, Class G above FL600
- B. Class G up to 14,500 MSL, Class E from 14,500 MSL up to 18,000MSL & include FL600, Class E above FL600
- C. Class G up to 1200 AGL, Class E from 1200 AGL up to 18,000 MSL, Class A from 18,000 to & include FL600, Class E above FL600
- D. Class B up to unknown altitude then Class E up to 18,000 MSL, Class A from 18,000 to & include FL600, Class E above FL600
- E. Class E up to 14,500 AGL, Class A from 14,500 to & include FL600, Class G above FL600





# What airspace are you in and what are the VFR Minimums?

- A. Class E - 3 sm, 1,000' above, 500' below & 2,000' horizontally
- B. Class G - 3 sm, 1,000' above, 500' below & 2,000' horizontally
- C. Class G - 3 nm, 1,000' above, 500' below & 2,000' horizontally
- D. Class G - 1 sm, Clear of Clouds
- E. Class E – 5 sm, 1,000' above, 1000' below & 1sm horizontally

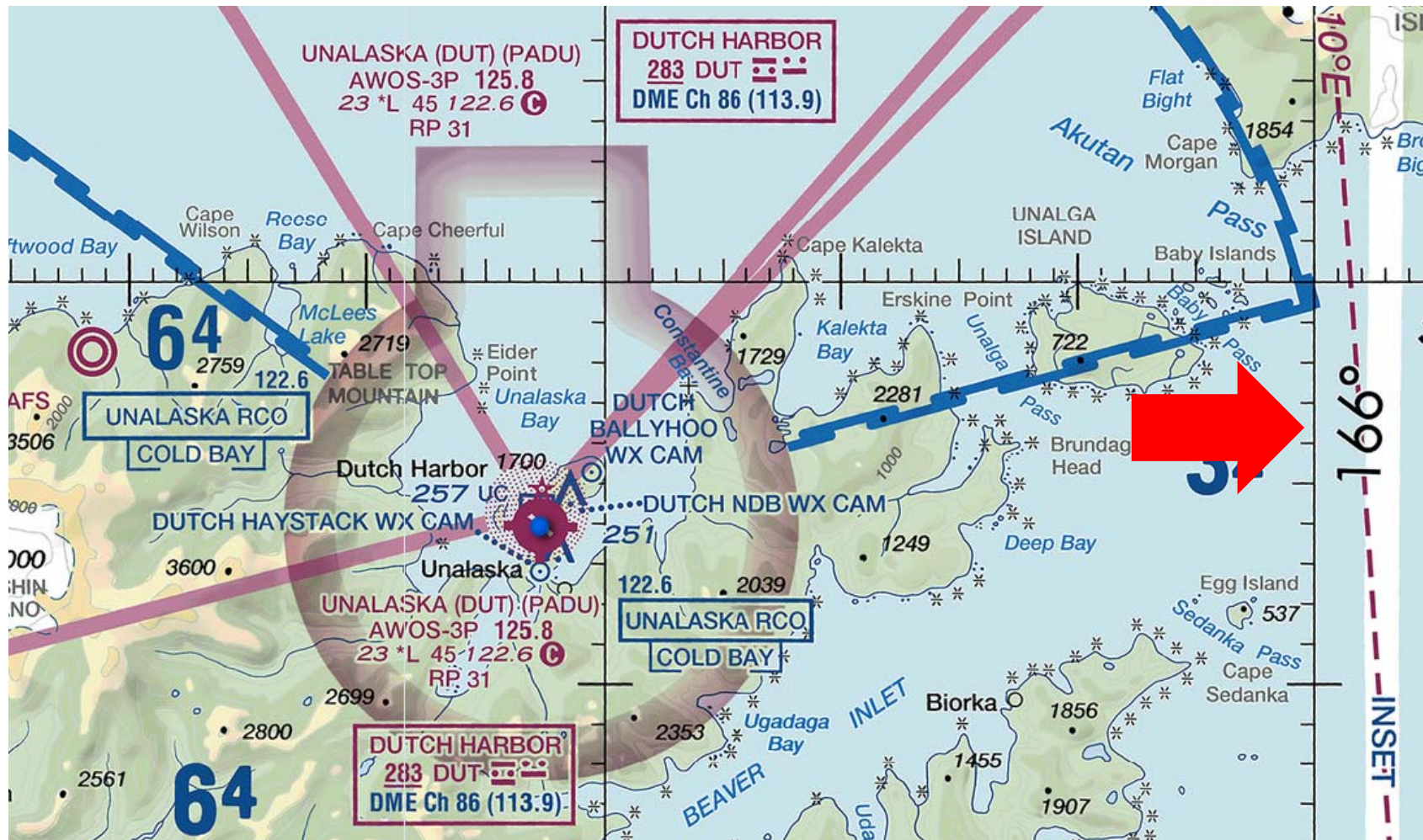


# What airspace are you in at 12,000 MSL and what are the VFR Minimums?

- A. Class E - 3 sm, 1,000' above, 500' below & 2,000' horizontally
- B. Class G - 3 sm, 1,000' above, 500' below & 2,000' horizontally
- C. Class G - 5 sm, 1,000' above, 1000' below & 1 sm horizontally
- D. Class G - 1 sm, Clear of Clouds
- E. Class E – 5 sm, 1,000' above, 1000' below & 1 sm horizontally



# Unalaska (Dutch Harbor) PADU



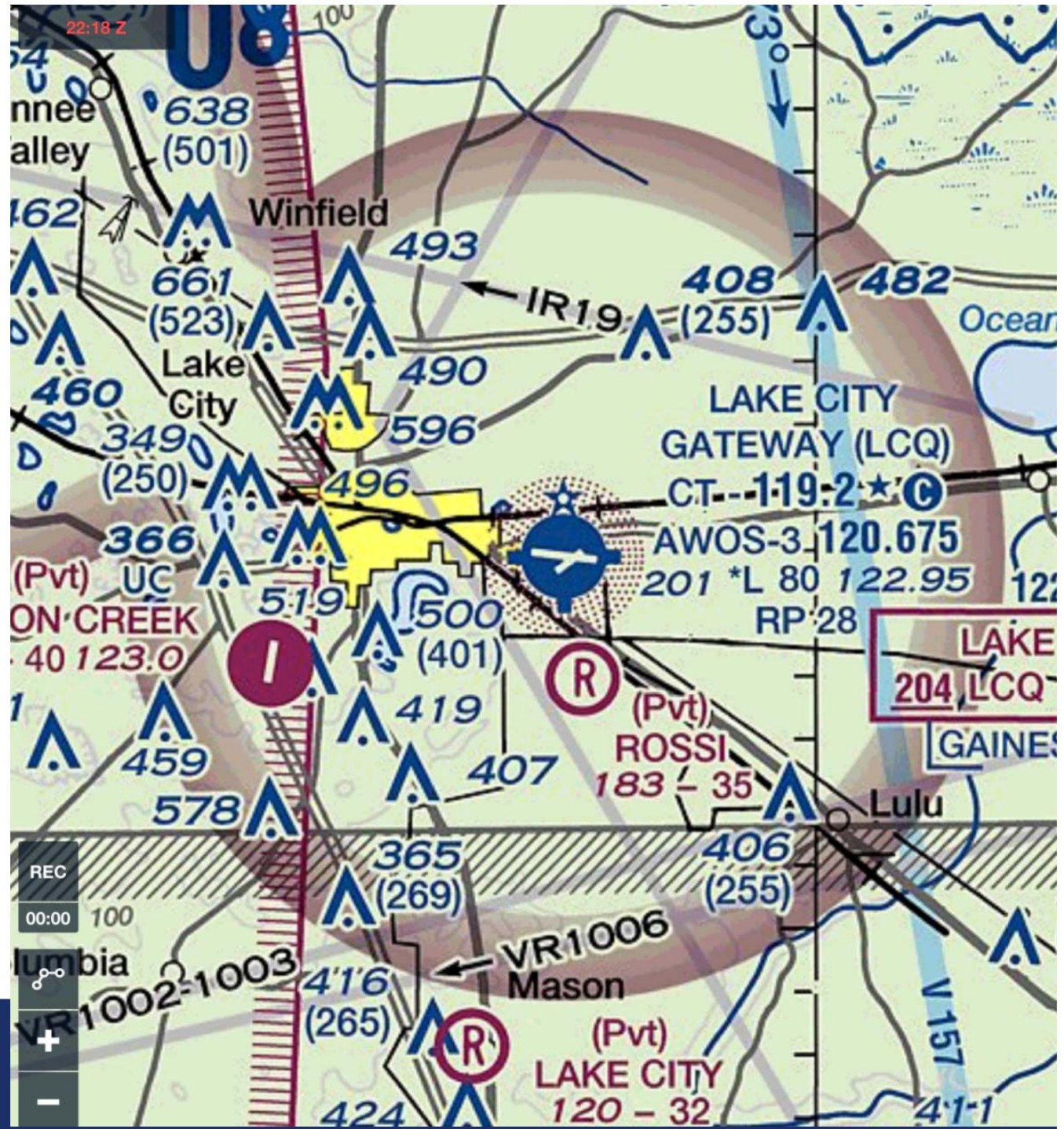
# What airspace would you be in if you could climb vertically from the surface up to 75,000?

- A. Class E up to 700 AGL, Class G from 700 AGL up to 18,000 MSL, Class A from 18,000 to & include FL600, Class G above FL600
- B. Class G up to 700 MSL, Class B up to 14,500 MSL, Class A from 14,500 to & include FL600, Class G above FL600
- C. Class G up to 700 AGL, Class E from 700 AGL up to 18,000 MSL, Class A from 18,000 to & include FL600, Class E above FL600
- D. Class G up to 700 AGL, Class E from 700 AGL up to 18,000 MSL, Class A from 18,000 to & include FL450, Class E above FL450
- E. Class E up to 1200 AGL, Class G up to 14,500 MSL, Class A from 14,500 to & include FL600, Class G above FL600





# Lake City Gateway (KLCQ)



# What airspace are you in and what are the VFR Minimums (3 miles south) ?

- A. Class G - 1 sm, 1,000' above, 500' below & 2,000' horizontally
- B. Class E - 3 sm, 1,000' above, 500' below & 2,000' horizontally
- C. Class D - 3 sm, 1,000' above, 500' below & 2,000' horizontally
- D. Class G - 1 sm, Clear of Clouds
- E. Class E – 5 sm, 1,000' above, 1000' below & 1sm horizontally



# What airspace are you in and what are the VFR Minimums (500 AGL Final) ?

- A. Class G - 3 sm, 1,000' above, 500' below & 2,000' horizontally
- B. Class E - 3 sm, 1,000' above, 500' below & 2,000' horizontally
- C. Class D - 3 sm, 1,000' above, 500' below & 2,000' horizontally
- D. Class G - 1 sm, Clear of Clouds
- E. Class E – 5 sm, 1,000' above, 1000' below & 1sm horizontally

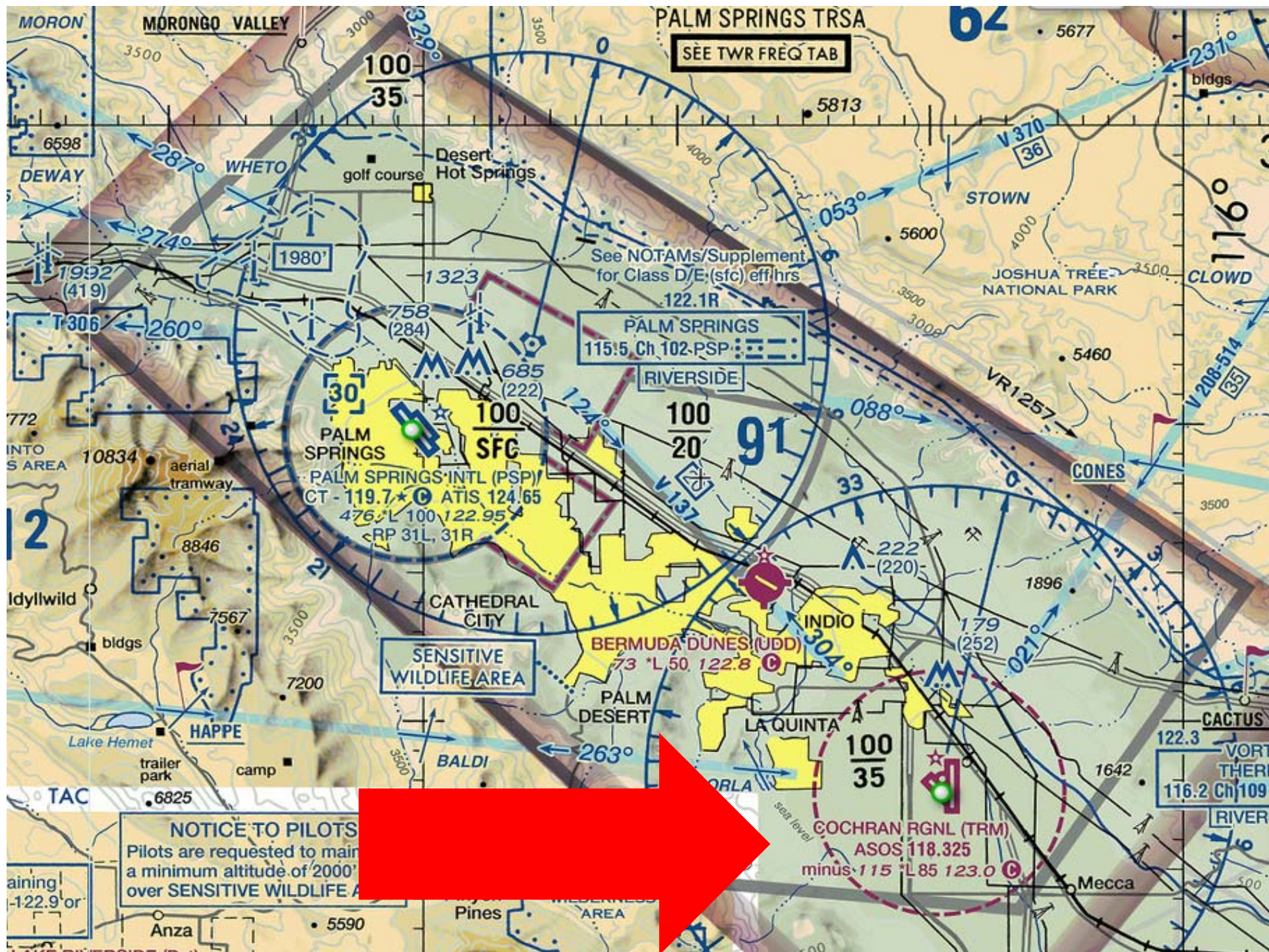


# Were you required to call the tower before landing at Lake City?

- A. Yes
- B. No
- C. No – but you are required to make radio calls like it was a non-towered airport.









# What airspace are you in and what are the VFR Minimums (500 AGL Final) ?

- A. Class G – to the surface
- B. Class E – to the surface
- C. Class D
- D. Class G – up to 700 AGL
- E. Terminal Radar Service Area (TRSA)



# Palm Springs

Back to Basic - Airspace  
June 2019

10:25 AM Fri Jun 21
69%

Palm Springs

**KPSP: Palm Springs International**  
Palm Springs, California, US  
33.83°N/116.51°W  
Sunrise, set: 1235Z, 0300Z

Taxiways  
Nearby  
Comments  
FBOs

Flight category	VFR	ATIS	124.65
Elevation	476' MSL	Clearance	128.35
Pattern altitude	1,476' MSL (est.)	Ground	121.9
Fuel	Jet A, Jet A+, 100LL	Tower	119.7
Procedures	GPS, VOR, RNAV, RNP	Appr, Dep	Multiple

FrequenciesWeatherRunwaysProceduresNOTAMsServicesA/FDMore

**COMMUNICATIONS:** CTAF 119.7 ATIS 124.65 760-327-2770 UNICOM 122.1R 115.5T (RIVERSIDE RADIO)

Ⓡ **SOCAL APP/DEP CON** 126.7 (9000'-13000') 135.275 (8000'-9000') 135.275 (8000'-9000') 135.275 (8000'-9000')

**TOWER** 119.7 (1400-0700Z±) **GND CON** 121.9 **CLNC DEL** 128.35

**AIRSPACE:** CLASS D svc 1400-0700Z±; other times CLASS G.

**TRSA** svc ctc **APP CON** 15 NM out.

**RADIO AIDS TO NAVIGATION:** NOTAM FILE PSP.

(L) **VORTAC** 115.5 PSP Chan 102 N33°52.20' W116°52.20'

VORTAC unusable:

- 135°-215° byd 20 NM blo 10,200'
- 215°-270° byd 15 NM blo 12,800'
- 278°-320° byd 25 NM blo 13,000'
- 320°-090° byd 15 NM blo 7,300'

**THERMAL (H) VORTAC** 116.2 TRM Chan 109 N33°37.1' W116°52.20'

-87/13E. NOTAM FILE TRM.

VOR unusable:

- 045°-060° byd 30 NM blo 12,000'

AirportsMapsPlatesDocumentsImageryFlightsScratchPadsMore

# Jacqueline Cochran - Thermal

10:26 AM Fri Jun 21
69%

Palm Springs


**KTRM: Jacqueline Cochran Regional**  
Palm Springs, California, US  
33.63°N/116.16°W  
Sunrise, set: 1235Z, 0258Z

Taxiways  
Nearby  
Comments  
FBOs

Flight category	VFR	ASOS	118.325
Elevation	-115' MSL	Clearance	-----
Pattern altitude	885' MSL (est.)	UNICOM	123.0
Fuel	Jet A, Jet A+, 100LL	CTAF	123.0
Procedures	GPS, VOR, RNAV	Appr & Dep	135.275

FrequenciesWeatherRunwaysProceduresNOTAMsServicesA/FDMore

**AIRPORT MANAGER:** (951) 955-9418  
**WEATHER DATA SOURCES:** ASOS 118.325 (760) 399-8054.  
**COMMUNICATIONS:** CTAF/UNICOM 123.0  
**THERMAL RCO** 122.3 (RIVERSIDE RADIO)  
(Ⓡ) **SOCAL APP/DEP CON** 135.275 (1400-0700Z‡)  
(Ⓡ) **L.A. CENTER APP/DEP CON** 128.15 (0700-1400Z‡)  
**CLNC DEL** For clnc del call SoCal App 800-448-3724  
**AIRSPACE:** CLASS E.  
**RADIO AIDS TO NAVIGATION:** NOTAM FILE TRM.  
**THERMAL (H) VORTAC** 116.2 TRM Chan 109 N33°3  
VOR unusable:  
045°-060° byd 30 NM blo 12,000'  
045°-060° byd 35 NM blo 13,500'  
060°-090° byd 35 NM blo 9,000'  
160°-185° byd 30 NM blo 14,000'  
160°-185° byd 20 NM blo 12,000'  
185°-260° byd 20 NM blo 18,500'

AirportsMapsPlatesDocumentsImageryFlightsScratchPadsMore







# What airspace are you in just two miles north of Nashua at 2,600 msl?

- A. Class B
- B. Class C
- C. Class D
- D. Class E
- E. Terminal Radar Service Area (TRSA)



# What is the maximum indicated airspeed you can be at?

- A. Below Mach 1.0 (or so)
- B. 250 Kts
- C. 200 kts
- D. 175 kts



# Charts

Things that make you  
go Hmmm...

90 Minutes

Presented to: On-Line Audience

By: Stephen K. Brown & John Wood

Date: January 2018





# Charts

I have a Question....

90 Minutes

Presented to: On-Line Audience

By: Stephen K. Brown & John Wood

Date: February 2018

