From:	Eick Donald
To:	Boggs Daniel
Cc:	Helson David
Subject:	Williston, FL Weather
Date:	Tuesday, April 18, 2017 9:08:56 AM
Attachments:	image001.png
	image011.png

Weather Conditions on April 15, 2017 surrounding Williston, Florida

Synoptic conditions – The NWS Surface Analysis Chart for 1400 EDT (1800Z) on April 15, 2017 is included. The chart depicted a high pressure system at 1031-hectopascals off the east coast with a ridge of high pressure extending southwestward into northern Florida. The station models depicted generally easterly winds at 10 to 20 knots across the region with partly cloudy skies, temperatures in the 80's (°F), with dew point temperatures in the 50's.

A review of the National radar mosaic indicated no weather echoes over the region immediately surrounding the period of the accident. A review of the NWS Storm Prediction Center (SPC) Convective Outlook indicated no thunderstorms were forecast over the region, so thunderstorms were rules out. The absence of any weather echoes also ruled out any microburst threat over the area.



<u>Observations</u> – <u>Williston Municipal Airport (KX60)</u> at an elevation of 76 feet, and a magnetic variation of 4° west, had an automated weather Observation System installed and reported the following conditions surrounding the period:

METAR KX60 151815Z AUTO 06008G15KT 105M CLR 29/14 A3024 RMK A01= METAR KX60 151835Z AUTO 09011G17KT 040V120 95M CLR 30/14 A3023 RMK A01= METAR KX60 151855Z AUTO 07008G16KT 95M CLR 29/15 A3023 RMK A01 **METAR KX60 151915Z AUTO 08008G17KT 105M CLR 30/14 A3022 RMK A01=** METAR KX60 151955Z AUTO 08009G17KT 10SM CLR 29/14 A3021 RMK A01=

<u>Ocala International Airport</u> – Jim Taylor Field (KOCA) was the next closest airport located 18 miles southeast. The following weather conditions were reported surrounding the period:

METAR KOCF 151750Z 12005G10KT 10SM SCT060 28/13 A3025= METAR KOCF 151850Z 09007KT 10SM SCT060 28/13 A3024= METAR KOCF 151950Z 10006KT 10SM SCT070 28/11 A3022=

<u>Gainesville Regional Airport (KGNV)</u> located approximately 23 miles northeast of the accident site and was the closest forecast location to the accident. The following conditions were reported surrounding the period:

METAR KGNV 151753Z 10016KT 105M FEW055 28/14 A3026 RMK AO2 SLP245 T02830144 10283 20161 58017= METAR KGNV 151853Z 12016G22KT 105M FEW055 27/13 A3025 RMK AO2 SLP241 T02720133= METAR KGNV 151953Z 10013G16KT 105M CLR 27/13 A3023 RMK AO2 SLP236 T02720133=

TAF KGNV 151729Z 1518/1618 10012G20KT P6SM BKN045

FM160000 11008KT P6SM FEW045 BKN250 FM160400 00000KT P6SM BKN250 FM161500 11007KT P6SM SCT250=

The forecast was for east winds at approximately 10 knots with fair weather cumulus type clouds with bases near 4,500 feet agl with high cirrus clouds above.

Sounding – A High-Resolution Rapid Refresh (HRRR) numerical model was run over the accident site and at the approximate hour of the event, and was plotted on a standard Skew T log P diagram. The image below is the 1400 EDT diagram of forecast conditions at the time of the accident. The model indicated a potential lifted condensation level (LCL) at 6,367 feet agl and a con (CCL) at 7,845 feet agl, and a level of free convection at 8,389 feet agl, supporting high based fair weather cumulus type clouds. With a lifted index of 0.0 and a K-index of 8.8 a low or weak support for convection was expected, and the low relative humidity of 38%. The wind profile indicated little variation in wind direction with height with increasing wind speeds to 20 knots by 6,000 feet. The mean 0 to 6 kilometer or 18,000 feet wind was from 120° at 12 knots, and the freezing level was identified at 12,600 feet. Only a light low-level wind shear condition was identified and no significant turbulence or icing conditions were identified. The relatively clear skies, warm temperatures did result in strong thermals to approximately 6,000 feet.



An Aircraft Meteorological And Data Report (AMDAR) from an aircraft identified as #12769 that departed from Orlando International Airport at 1501 EDT (1901Z) approximately 80 miles southeast of the accident site provided another vertical sounding and is provided below. No significant inversions were noted below 5,000 feet. The wind was from the east or from 112° at 9 knots and increased to 100° at 20 knots at 640 feet.



Satellite imagery – the GOES-13 visible and infrared imagery were also reviewed. The visible image at 1515 EDT (1915Z) at 2X magnification is included. The image depicts fair weather cumulus clouds scattered over the area with some high cirriform clouds above, indicative of normal diurnal heating and cellular convection. The east coast sea breeze front can be seen pushed further inland with the prevailing easterly winds, with no defined sea breeze front on the west coast of

Florida. No cumulonimbus (CB) or cumulus congestus (TCU) type clouds are observed over the region and no outflow boundaries identified in the cloud features.



Pilot Reports (UA)- the following reports were captured:

6A2 UA /OV ATL180025/TM 1334/FL150/TP MD88/RM SMOOTH AND CLEAR/ZTLFD TLH UA /OV ABY175069 /TM 1727 /FL035 /TP P28A /SK BKN-TOP082 /TB NEG /RM CI ABV 250

Area Forecast (FA) - the forecast current at the time of the accident was as follows:

FAUS42 KKCI 151745 FA2W -MIAC FA 151745 SYNOPSIS AND VFR CLDS/WX SYNOPSIS VALID UNTIL 161200 CLDS/WX VALID UNTIL 160600...OTLK VALID 160600-161200 NC SC GA FL AND CSTL WTRS E OF 85W

SEE AIRMET SIERRA FOR IFR CONDS AND MTN OBSCN. TS IMPLY SEV OR GTR TURB SEV ICE LLWS AND IFR CONDS. NON MSL HGTS DENOTED BY AGL OR CIG.

SYNOPSIS...HI PRES OVR WRN ATLC NO SGFNT FNTS OR BNDRYS THRU 12Z.

. GA

N HLF...SCT050 BKN CI. OTLK...VFR 11Z MVFR BR. SW...SCT050 BKN CI. 00Z BKN CI. OTLK...VFR 11Z MVFR BR. SE...SCT050 SCT-BKN CI. 01Z SCT-BKN CI. OTLK...VFR 09Z IFR CIG BR.

FL

PNHDL...SCT-BKN050 TOP 070 BKN CI. 03Z SCT CI. OTLK...VFR 09Z MVFR BR. **N...SCT050 SCT-BKN CI. TIL 00Z WND SE G25KT.** OTLK...VFR 09Z MVFR CIG BR. CNTRL...SCT-BKN040 TOP 060 BKN CI. WND E G25KT. 00Z SCT040 SCT-BKN CI. OTLK...VFR 12Z MVFR CIG BR. S...SCT025 SCT-BKN050 TOP 170 BKN CI. WDLY SCT -SHRA. WND E G25KT. 02Z SCT025 SCT CI. OTLK...VFR 11Z MVFR CIG. FL KEYS...SCT025 SCT-BKN050 TOP 170. WDLY SCT -SHRA. WND E G25KT. OTLK...VFR SHRA WND.

The forecast expected scattered clouds at 5,000 feet with scattered to broken high level cirriform type clouds, winds from the southeast gusting to 25 knots till 2000 EDT.

Inflight Weather Advisories – there were no Convective SIGMETs, SIGMETs, CWA's current for the region. The only advisories were AIRMET Tango for moderate turbulence below 6,000 feet due to the strong on-shore wind flow. The narrative and plot of the advisory is included below. The advisory was confirmed or validated by any pilot reports of turbulence over Florida.

WAUS42 KKCI 151445 WA2T -MIAT WA 151445 AIRMET TANGO UPDT 2 FOR TURB VALID UNTIL 152100

AIRMET TURB...SC GA FL AND CSTL WTRS FROM 20E SAV TO 20NNE CRG TO 30NE PBI TO 40SSE MIA TO 20SSW EYW TO 50NNE EYW TO 20WSW PIE TO 40E TLH TO 20E SAV MOD TURB BLW 060. CONDS CONTG BYD 21Z ENDG 00-03Z.

TANGO 2017-04-15 18:00:00

Winds and Temperature Aloft Forecast (FD) - current during the period:

 WINDS ALOFT FORECASTS

 DATA BASED ON 151200Z

 VALID 151800Z FOR USE 1400-2100Z. TEMPS NEG ABV 24000

 FT
 3000
 6000
 9000
 12000
 18000
 24000
 30000
 34000
 39000

 JAX
 1216
 1225+10
 1218+04
 1309+00
 1410-13
 1905-25
 241241
 241350
 231963

 PIE
 1014
 1015+10
 1222+06
 1513+02
 1106-13
 2008-24
 201540
 181651
 221961

 TLH
 1311
 1322+10
 1417+06
 1714+01
 1307-13
 1508-25
 211441
 211751
 202263

 CSG
 1312
 1524+11
 1623+05
 1714+00
 1808-13
 1910-26
 211441
 211851
 211863

 ATL
 1511
 1624+10
 1625+04
 1717-01
 1907-13
 2209-26
 231641
 231951
 231863

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