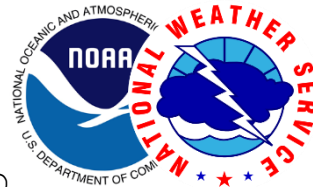


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POST TROPICAL CYCLONE REPORT...HURRICANE IRMA...UPDATED
NATIONAL WEATHER SERVICE KEY WEST FL
1250 PM EDT FRI SEP 29 2017

UPDATED TEXT IN HEADLINES AND INCLUDED BAHIA HONDA STATE PARK
RAINFALL TOTAL.

NOTE: THE DATA SHOWN HERE ARE PRELIMINARY....AND SUBJECT TO UPDATES
AND CORRECTIONS AS APPROPRIATE.

THIS REPORT INCLUDES EVENTS OCCURRING WHEN WATCHES AND/OR WARNINGS
WERE IN EFFECT...OR WHEN SIGNIFICANT FLOODING ASSOCIATED WITH IRMA OR
ITS REMNANTS WAS AFFECTING THE AREA.

COUNTIES INCLUDED...MONROE

A. LOWEST SEA LEVEL PRESSURE/MAXIMUM SUSTAINED WINDS AND PEAK GUSTS

METAR OBSERVATIONS...

NOTE: ANEMOMETER HEIGHT IS 10 METERS AND WIND AVERAGING IS 2 MINUTES

LOCATION	ID	MIN	DATE/	MAX	DATE/	PEAK	DATE/
LAT LON		PRES	TIME	SUST	TIME	GUST	TIME
DEG DECIMAL		(MB)	(UTC)	(KT)	(UTC)	(KT)	(UTC)

KEYW-KEY WEST INTERNATIONAL AIRPORT

24.56	-81.76			I 020/052	10/1115	030/082	10/1113
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KMTH-FLORIDA KEYS MARATHON INTERNATIONAL AIRPORT

24.73	-81.05			I 060/044	09/2353	060/062	09/2345
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NON-METAR OBSERVATIONS...

NOTE: ANEMOMETER HEIGHT IN METERS AND WIND AVERAGING PERIOD IN
MINUTES INDICATED UNDER MAXIMUM SUSTAINED WIND IF KNOWN

LOCATION	ID	MIN	DATE/	MAX	DATE/	PEAK	DATE/
LAT LON		PRES	TIME	SUST	TIME	GUST	TIME
DEG DECIMAL		(MB)	(UTC)	(KT)	(UTC)	(KT)	(UTC)

KYWF1 - KEY WEST NOAA/NOS TIDE GAUGE

25.55	-81.81			340/061	10/1224	340/078	10/1224
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ANEMOMETER HEIGHT 15 M (49.2 FT AGL)

ADDITIONAL WIND REPORTS FOR THE NORTH KEY LARGO HANDAR AND KEY DEER
NWR RAWs IN SECTION A AND STORM TOTAL RAINFALL REPORTS IN SECTION C.

VCAF1 - VACA KEY NOAA/NOS TIDE GAUGE

24.71 -81.11 160/054 10/1342 160/081 10/1342
ANEMOMETER HEIGHT 6.5 M (21.3 FT AGL)

XSMS - WEATHERFLOW KEY WEST COAST GUARD SECTOR

24.57 -81.57 952.9 10/1225 014/053 10/1140 349/077 10/1245

XUMK - WEATHERFLOW UPPER MATECUMBE KEY

24.92 -80.64 976.3 10/1256 160/061 10/1436 158/081 10/1401

XSKL - WEATHERFLOW SOUTH KEY LARGO

25.10 -80.43 980.8 10/1347 135/054 10/1542 135/074 10/1542

TS607 - KEY DEER NATIONAL WILDLIFE REFUGE RAWs (BIG PINE KEY)

24.72 -81.39 090/048 10/1438 104/104 10/1338
ANEMOMETER HEIGHT 6.1 M (20 FT AGL)
SUSTAINED WINDS 10-MIN AVERAGE

KLNF1 - NORTH KEY LARGO HANDAR

25.19 -80.35 987.5 10/1400 110/045 10/1330 110/063 10/1300
10/1500

WFO KEY WEST (ROOFTOP RSOIS)

24.55 -81.79 030/079 10/1155

USCG ISLAMORADA STATION

24.95 -80.59 050/071 10/0430
ANEMOMETER HEIGHT 5.5 M (18 FT AGL)

104.1 FM STUDIO - UPPER SUGARLOAF KEY

24.67 -81.53 939.7 10/1315

REMARK: REPORTED AS 27.75 IN

B. MARINE OBSERVATIONS

NOTE: ANEMOMETER HEIGHT IN METERS AND WIND AVERAGING PERIOD IN
MINUTES INDICATED UNDER MAXIMUM SUSTAINED WIND IF KNOWN

LOCATION ID MIN DATE/ MAX DATE/ PEAK DATE/
LAT LON PRES TIME SUST TIME GUST TIME
DEG DECIMAL (MB) (UTC) (KT) (UTC) (KT) (UTC)

PLSF1 - PULASKI SHOAL LIGHT CMAN

24.70 -82.77 986.5 10/1500 010/059 10/1200 010/072 10/1142
ANEMOMETER HEIGHT 17.7 M (58.1 FT AMSL)

XSMS - WEATHERFLOW SMITH SHOAL LIGHT
24.72 -81.92 964.6 10/1230 027/067 10/1210 035/084 10/0905

XALG - WEATHERFLOW ALLIGATOR REEF LIGHT
24.85 -80.62 977.0 10/1204 106/062 10/1159 106/081 10/1159

MLRF1 - MOLASSES REEF LIGHT CMAN
25.01 -80.38 884.7 10/1300 I 130/065 10/1200 140/080 10/1300
140/065 10/1300

ANEMOMETER HEIGHT 15.8 M (51.8 FT AMSL)

XCFL - WEATHERFLOW CARYSFORT REEF LIGHT
25.23 -80.21 986.8 10/1325 120/062 10/1240 124/081 10/1335
ANEMOMETER HEIGHT 47 FEET AMSL

C. STORM TOTAL RAINFALL FROM 0400 UTC SEP 09 UNTIL 0400 UTC SEP 12

CITY/TOWN COUNTY ID RAINFALL
LAT LON (IN)
DEG DECIMAL

KEY DEER NATIONAL WILDLIFE REFUGE RAWS (BIG PINE KEY)
24.72 -81.39 MONROE TS607 12.54

5.3 SW KEY LARGO
25.05 -80.49 MONROE COCORAHS 9.98
RAINFALL RECOVERED FOR PERIOD SEP 08 THROUGH SEP 15

0.9 SSW CUDJOE KEY
24.66 -81.51 MONROE COCORAHS 9.76
RAINFALL RECOVERED FOR PERIOD SEP 09 THROUGH SEP 18

6.8 ENE MARATHON
24.74 -80.98 MONROE COCORAHS 9.42
RAINFALL RECOVERED FOR PERIOD SEP 09 THROUGH SEP 19

1.3 NE KEY WEST
24.57 -81.76 MONROE COCORAHS 9.03

1 WSW BAHIA HONDA KEY
24.66 -81.28 MONROE BPNF1 7.58
RAINFALL RECOVERED FOR PERIOD SEP 06 THROUGH SEP 22

NORTH KEY LARGO HANDAR
24.19 -80.35 MONROE KLNF1 7.16

6.2 NE KEY LARGO

25.17 -80.37

MONROE

COCORAHS

6.93

RAINFALL RECOVERED FOR PERIOD SEP 07 THROUGH SEP 13

1 SW KEY WEST

24.55 -81.79

MONROE

KKEY

5.70

REMARKS (UPDATED): DUE TO INCOMPLETE RAINFALL RECORDS FROM FAILED AUTOMATED STATIONS AND MANDATORY RESIDENTIAL EVACUATION OF MONROE COUNTY FLORIDA KEYS...PLEASE NOTE SPECIFIC RAINFALL RECOVERY PERIODS AS RESIDENTS AND PARTNERS RETURNED TO REPORT TOTAL RAINFALL.

D. INLAND FLOODING

MONROE FLORIDA KEYS...RAINFALL FLOODING OF 6 TO 18 INCHES IN DEPTH OBSERVED IN OCEAN REEF DURING MONROE EOC CONTINUITY OF OPERATIONS CLEARLY DISTINGUISHABLE FROM STORM SURGE. RAINFALL ON TOP OF EXISTING STORM SURGE RESULTED IN TOTAL WATER HEIGHT 6 TO 10 INCH HIGHER STORM SURGE VALUES IN NEW TOWN KEY WEST PER MEASURED WATERLINES.

REMARKS: STORM SURGE VALUES GREATLY EXCEEDED POTENTIAL RAINFALL FLOOD DEPTHS ACROSS MOST AREAS OF THE FLORIDA KEYS AND WILL B (TOP OF THE 5TH STOREY ABOVE GROUND)E VERY DIFFICULT TO DISTINGUISH.

E. MAXIMUM STORM SURGE AND STORM TIDE

OFFICIAL TIDE GAUGES NOTED WITH LEADING G

COUNTY	CITY/TOWN OR LOCATION	SURGE (FT)	TIDE (FT)	DATE/TIME	BEACH EROSION
MONROE	G KYWF1-KEY WEST	2.77	2.73	10/1742	I
MONROE	G KYWF1-KEY WEST	3.29	2.56	10/1424	I
MONROE	G VCAF1-VACA KEY	2.77	2.21	11/0118	I
MONROE	G VCAF1-VACA KEY	2.80	2.19	11/0130	I
MONROE	G MANATEE BAY CR		4.05	10/1000	I

REMARKS: FOR EACH STATION...

- ...FIRST ROW DENOTES TIME OF MAX STORM TIDE IN FT NAVD88
- ...SECOND ROW DENOTES TIME OF MAX STORM SURGE IN FT
- ...MANATEE BAY CREEK USGS GAUGE

ADDITIONAL REMARKS:

BASED ON DAMAGE SURVEYS...THE ESTIMATED INUNDATION OR PEAK FLOODING ABOVE GROUND (ABOVE MEAN HIGHER HIGH WATER - MHHW) REACHED 5 TO 8 FEET OVER PORTIONS OF THE LOWER AND MIDDLE KEYS. THIS INCLUDES PORTIONS OF SUGARLOAF KEY...CUDJOE KEY...RAMROD KEY...BIG PINE KEY...BAHIA HONDA KEY...VACA KEY (MARATHON AND KEY COLONY BEACH)...AND DUCK KEY.

OFFICIAL GAUGES AT KEY WEST AND VACA KEY ARE LOCATED ON THE GULF OF MEXICO COAST AND BAYSIDE RESPECTIVELY. KEY WEST STORM TIDE LEVELS WERE OBSERVED TO BE CONSISTENT WITH OBSERVED STORM SURGE FLOODING IN KEY WEST. VACA KEY BAYSIDE WAS IN THE LEE OF THE MAXIMUM SOUTH WINDS WITH MAXIMUM STORM TIDE VALUES OCCURRING WELL AFTER HURRICANE IRMA WAS CENTERED 35 MILES EAST-NORTHEAST OF FORT MYERS.

F. TORNADOES

(DIST)CITY/TOWN	COUNTY	DATE/ TIME (UTC)	EF SCALE (IF KNOWN)
LAT LON (DEG DECIMAL DESCRIPTION			

REMARKS: NO DISCERNABLE TORNADO DAMAGE PATHS WERE DETERMINED AT THIS TIME. THERE WAS EVIDENCE OF NON-UPDRAFT-INDUCED MESO-VORTICY DAMAGE RESULTING IN OPPOSITE FALL OF A CONTINUOUS STRETCH OF WOOD AND HOLLOW SPUN CONCRETE POWER DISTRIBUTION POLES ALONG KEY DEER BOULEVARD ALMOST TWO MILES NORTHWEST OF AN AREA OF LOCALLY EXTREME WIND DAMAGE ON BIG PINE KEY. THIS WIND DAMAGE LIKELY OCCURRED WITHIN THE ALMOST TWO-HOUR PASSAGE OF THE EASTERN EYEWALL OF HURRICANE IRMA.

G. STORM IMPACTS BY COUNTY

COUNTY DESCRIPTION	DEATHS	INJURIES	EVACUATIONS
MONROE	9	SEE REMARKS	SEE REMARKS

THE FOLLOWING REPORT IS PRELIMINARY AND MAY BE REVISED PENDING OFFICIAL JURISDICTIONAL AND DIVISIONAL REPORTS.

REMARKS: FATALITY INFO RELEASED BY THE MONROE COUNTY SHERIFFS OFFICE. THIS VALUE MAY BE REVISED PENDING RELEASE OF ADDITIONAL INFORMATION FROM AN OFFICIAL MONROE COUNTY SOURCE. INCLUDES BOTH DIRECT AND INDIRECT CAUSES.

MORE THAN 40 INJURIES WERE IMMEDIATELY REPORTED WITHIN ONE DAY OF HURRICANE IRMA'S DEPARTURE...BUT TOTAL INJURIES BOTH DIRECT AND INDIRECT ARE PENDING.

PRELIMINARY EVACUATION TOTALS PRIOR TO THE ARRIVAL OF HURRICANE IRMA OUT OF APPROXIMATELY 73,000 RESIDENTS OF MONROE COUNTY INDICATE APPROXIMATELY A 75 PERCENT EVACUATION RATE.

MONROE LOWER KEYS...KEY WEST THROUGH LITTLE DUCK KEY

OVER BAHIA HONDA THROUGH LITTLE TORCH KEY...THE STRONGEST ESTIMATED WINDS WERE EVIDENT...POSSIBLY ATTRIBUTABLE TO A MESO-VORTEX CIRCULATION WITHIN THE EYEWALL. A GENERAL PATH OF MAXIMUM WIND DAMAGE OCCURRED FROM JUST SOUTH OF BIG PINE KEY PARK THROUGH KEY DEER BOULEVARD NORTH OF SOUTH STREET. COMPLETE ROOF STRUCTURE FAILURE INVOLVING SNAPPED WOOD TRUSSES WAS OBSERVED ON SEVERAL HOMES ALONG WITH COMPLETE EXTERIOR WALL FAILURE ON A WATERFRONT HOME. THE PATH CONTINUED ACROSS KEY DEER BOULEVARD WHERE UTILITY POLES BOTH OF WOOD AND HOLLOW-SPUN CONCRETE DESIGN WERE SNAPPED WITH NUMEROUS SPANS LYING IN COMPLETELY OPPOSITE DIRECTIONS...THE SOUTHERN SPANS OPPOSITE TO THE PATH DIRECTION. PEAK WIND GUSTS ESTIMATED 150 TO 160 MPH ALONG THE NORTHERN SIDE OF THE POSSIBLE CIRCULATION. ELSEWHERE ACROSS BIG PINE KEY...SIGNIFICANT ROOF LOSS/EXTERIOR WALL COLLAPSE OF OLDER MOBILE HOMES...LARGE SECTIONS OF ROOF COVERINGS ALL TYPES...SOFFET DAMAGE AND LARGE METAL ROOF...WALL...AND DOOR FAILURES ON A MODERN METAL BUILDING SYSTEM INDICATED MORE WIDESPREAD ESTIMATED PEAK WIND GUSTS OF 120 TO 130 MPH.

FROM RAMROD KEY THROUGH SUGARLOAF KEY...WIDESPREAD AND BUSINESS - RESIDENTIAL ROOF COVERING DAMAGE OF ALL TYPES WAS OBSERVED...WITH ISOLATED ROOF TRUSS OR GABLE END FAILURES OF OLDER DESIGN. IT WAS NOTED A DIAGONAL METAL CROSS BRACE ON THE POWER TRANSMISSION LINE ACROSS NILES CHANNEL BECAME DETACHED FROM ONE VERTICAL CONCRETE COLUMN INDICATIVE OF SIGNIFICANT FLEXING OF THE TRANSMISSION TOWERS. ESTIMATED PEAK WIND GUST 110 TO 120 MPH.

FROM LOWER SUGARLOAF THROUGH BIG COPPITT KEY...WIDESPREAD SMALL RESIDENTIAL AND BUSINESS ROOF COVERINGS WITH ISOLATED STRUCTURAL GABLE END OR OVERHANG DAMAGE WAS NOTED ESPECIALLY IN AREAS OF OPEN NORTH WIND EXPOSURE. ISOLATED MOBILE HOME DESTRUCTION INCLUDING COLLAPSE OF ALL WALLS...ALTHOUGH SOME MODERN MOBILE HOMES ADJACENT TO PROPERTIES WITH SEVERE DESTRUCTION EXHIBITED FEW SIGNS OF COSMETIC DAMAGE. ESTIMATED PEAK WIND GUSTS 100 TO 110 MPH.

FROM BOCA CHICA KEY THROUGH KEY WEST...LOSSES OF ROOF COVERINGS...SOFFET DAMAGE TO RESIDENTIAL HOMES AND CONDOMINIUMS WERE

NOTED...WITH TWO LODGING PROPERTIES INDICATED WITH GABLE END WOOD TRUSS FAILURES OF BOTH MID-RISE AND TWO-STOREY DESIGN. PEAK ESTIMATED WIND GUSTS 90 TO 100 MPH...ALTHOUGH THE MID-RISE ROOF STRUCTURE FAILURE LOCATED WITH OPEN NORTH WIND EXPOSURE OFF THE GULF OF MEXICO MAY HAVE INDICATED ISOLATED STRONGER WIND GUSTS OF 100 TO 110 MPH AT ROOFTOP LEVEL IN THIS HOUR.

TREE DAMAGE WAS WIDESPREAD AND EXTENSIVE.

MONROE MIDDLE KEYS...PIGEON KEY/MARATHON THROUGH CRAIG KEY

WIND DAMAGE FROM LONG KEY/LAYTON THROUGH GRASSY KEY INCLUDED SEVERAL SECTIONS OF PULLED METAL BUILDING SYSTEM WALL PANELS...DAMAGE TO BUILT-UP AND SHINGLE ROOF COVERINGS...VINYL SIDING...AND PLASTIC PANELED SIGNS. PEAK WIND GUSTS ESTIMATED 90 TO 100 MPH.

THE FOLLOWING REPORT IS PRELIMINARY AND MAY BE REVISED PENDING OFFICIAL JURISDICTIONAL AND DIVISIONAL REPORTS. IN THE KEY COLONY BEACH AND MARATHON VICINITY...AREAL OVERFLIGHT FROM LOCAL AGENCIES REVEALED SIGNIFICANT ROOF COVERING LOSS AND ISOLATED ROOF TRUSS DAMAGE ON OLDER DESIGN OCEANFRONT HOMES. OLDER RETAIL STORES AND A STRIP MALL DISPLAYED COMPLETE UPLIFT AND COLLAPSE OF ROOF STRUCTURES OF BOX TRUSS TYPE...WHILE MODERN DESIGN STRUCTURES DISPLAYED SIGNIFICANT SECTIONS OF ROOF COVERING LOSS...INCLUDING METAL PANEL-OVER WOOD SHEATHING AND BUILT-UP TAR/RUBBER COVERINGS. SOME OLDER SERVICE STATION CANOPIES DISPLAYED COLUMN BUCKLING WHEREAS MODERN DESIGNS PERFORMED WELL OR HAD SLIGHT RACKING. SIGNIFICANT ROOF PANEL DAMAGE TO MOBILE HOMES OVER BOTH OLDER AND MODERN DESIGN. WHILE TRAFFIC SIGNAL MASTS REMAINED IN PLACE SOME HORIZONTALLY MOUNTED SIGNALS WERE STILL BLOWN 90 DEGREES OUT OF ALIGNMENT. PEAK WIND GUSTS ESTIMATED 100 TO 115 MPH.

TREE DAMAGE WAS WIDESPREAD AND EXTENSIVE.

MONROE UPPER KEYS...LOWER MATECUMBE KEY THROUGH OCEAN REEF

WIND DAMAGE FROM OCEAN REEF THROUGH KEY LARGO WAS CONSISTENT WITH ESTIMATED PEAK GUSTS NEAR 90 MPH WITH LIMITED LOSSES OF BUILT-UP ROOF COVERINGS...AND METAL FASCIA FROM GAS STATION CANOPIES. SOME OLDER STRIP MALLS IN KEY LARGO DISPLAYED LARGE LOSSES OF SHINGLE AND BARRELL TILE COVERINGS.

IN TAVERNIER...MODERN DESIGN LARGE METAL BUILDING SYSTEMS DISPLAYED FAILURE OF OVERHEAD DOORS ON EAST AND SOUTHEAST-FACING SIDES...WITH OLDER DESIGNS INCLUDING SOME PULLED EXTERIOR SHEET PANELS. PEAK

GUSTS NEAR 100 MPH ESTIMATED. SIGN DAMAGE WAS MORE PREVALENT THAN IN KEY LARGO.

IN ISLAMORADA...WIND ESTIMATION AMONG MOBILE HOMES WAS DIFFICULT DUE TO IMPACTS OF STORM SURGE FLOODING...HOWEVER ROOF PANELS WERE STRIPPED FROM SOME HOMES ALONG WITH VINYL SIDING DAMAGE ON MODERN SINGLE FAMILY HOMES. ONE SERVICE STATION CANOPY WAS COMPLETELY OVERTURNED...HOWEVER THERE WAS NO DISCERNABLE DAMAGE TO THE FOUNDATION FLANGES OR COLUMNS. PEAK WIND GUSTS ESTIMATED AT 90 TO 100 MPH.

TREE DAMAGE WAS WIDESPREAD AND EXTENSIVE.

THROUGHOUT THE KEYS--WIDESPREAD LOSS OF ELECTRIC POWER...CELLULAR COMMUNICATIONS AND WATER PRESSURE OCCURRED. MOST POWER PROBLEMS WERE DUE TO FAILURE OF DISTRIBUTION SYSTEMS...ALTHOUGH SIGNICANT INSULATOR DAMAGE OCCURRED NEAR THE EAST END OF LONG KEY ON THE TRANSMISSION LINE. THE WATER TRANSMISSION PIPE WAS LARGELY INTACT...HOWEVER NUMEROUS NEIGHBORHOOD DISTRIBUTION LEAKS OCCURRED AS TREES UPROOTED. NO COMMUNICATIONS TOWERS WERE REPORTED COLLAPSED OR DEFORMED...ALTHOUGH MOUNTED ANTENNAS ON THE TOWERS WERE DAMAGED OR FELL OUT OF ALIGNMENT. A FEW MICROWAVE RELAY DISHES WERE TORN FROM THEIR TOWERS. WIDESPREAD DAMAGE TO TELECOM AND FIBER CABLES DUE TO FALLING TREES AND DIRECT WIND IMPACTS STRIPPING FROM POLES AND BEING STRETCHED ACROSS STREETS.

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LEGEND:

I-INCOMPLETE DATA

E-ESTIMATED

RIZZO/MORELAND

