

APPENDIX A

LOCAL NATIONAL WEATHER SERVICE (NWS) OFFICE PRODUCTS

A.1. Hurricane/Typhoon Local Statements (HLS). WFOs with coastal county responsibilities and selected inland WFOs will issue these unnumbered products which are very specific and designed to inform media, local decision makers, and the public on present and anticipated storm effects in their county warning area (CWA) and adjacent coastal waters. *Keep HLSs as succinct as possible.*

A.1.1. Mission Connection. Alert the public, media, and local decision makers of potential or actual storm affects due to tropical cyclones. The product is intended to provide information to assist in the preparation and implementation of necessary precautions for the protection of life and property, as well as minimize the economic losses as a result of tropical cyclones.

A.1.2. Issuance Guidelines.

A.1.2.1. Issuance Criteria. The following WFOs will issue HLSs when their area of responsibility is affected by a tropical cyclone watch/warning or evacuation orders. HLSs may also be issued as needed to dispel rumors or to clarify tropical cyclone related information for their CWA. Coastal WFOs have the option to include inland counties in the HLS not affected by a watch or warning.

Coastal WFOs are defined as those having at least one county with significant tidal influences. Those are:

Eastern Region

Caribou, ME
Portland, ME
Boston, MA
New York City, NY
Philadelphia, PA
Baltimore, MD/Washington, DC
Wakefield, VA
Newport/Morehead City, NC
Wilmington, NC
Charleston, SC

Southern Region

Brownsville, TX
Corpus Christi, TX
Houston/Galveston, TX
Lake Charles, LA
New Orleans, LA
Mobile, AL
Tallahassee, FL
Tampa Bay, FL
Miami, FL
Key West, FL
Melbourne, FL
Jacksonville, FL
San Juan, PR

Western Region

San Diego, CA
Los Angeles/Oxnard, CA

Pacific Region

Honolulu, HI
Guam
WSO Pago Pago, American Samoa

Inland WFOs listed below will also issue HLSs when hurricane or tropical storm force winds are expected to impact their area of responsibility. Inland offices not issuing HLSs but expecting hurricane or tropical storm force winds may be required to issue an Inland Tropical

Storm/Hurricane Watches or Warnings.

Atlanta, GA	Jackson, MS
Birmingham, AL	Huntsville, AL
Austin/San Antonio, TX	Midland, TX
San Angelo, TX	Lubbock, TX
Fort Worth, TX	Shreveport, LA

A.1.2.2. Issuance Times. The initial HLS should be issued as soon as possible following the first issuance of a tropical storm/hurricane watch/warning for the WFO's area of responsibility. When a tropical storm or hurricane is close to the coast, issue HLSs every 2 to 3 hours or more frequently as circumstances warrant. Do not release HLSs immediately before an advisory unless information is coordinated with the appropriate tropical cyclone center. HLSs do not need to immediately follow the issuance of a new hurricane advisory. Issuing HLSs midway between advisories maintains a steady flow of information to the media and the public. However, when local storm impacts are changing rapidly, or a new advisory changes the potential impact on a local area, information needs to be distributed in a fresh HLS as soon as possible. Routine HLSs may cease when the tropical cyclone is no longer a threat to an office's CWA.

A.1.2.3. Valid Time. HLSs are valid at the time of issuance until a subsequent HLS is issued. HLSs are issued at least once every 6 hours.

A.1.2.4. Product Expiration Time. Generally 6 hours after the issuance time and should coincide with the next expected update or when the event is forecast to end.

A.1.3. Technical Description. HLSs will follow the format and content described in this section.

A.1.3.1. Content. HLSs will add localized details to tropical cyclone center's advisory releases and should not conflict with or repeat advisory information not directly applicable to the local office's CWA. Before the first HLS, use public information statements (PNS) to inform the public on routine hurricane preparedness information. The first HLS can also contain standard preparedness messages. Information may be added to the end of the HLS describing where additional storm information can be found in supporting Center's TCP and TCM as well as PNSs and NOWs (Short Term Forecast) issued by the local office.

HLSs should use tropical cyclone position estimates provided by their tropical cyclone center between advisories when appropriate. When tropical cyclones threaten the Samoas (American Samoa and Samoa), the two local offices will coordinate with RSMC Nadi, CPHC, and with each other to determine the best integrated and internally consistent forecast of conditions expected in the area.

The following table defines which products are issued via the normal suite of product headers during tropical cyclone watches/warnings and those products superseded by tropical cyclone watches/warnings and carried in a HLS.

Table A-1. HLS Product Table

Product	Tropical Cyclone Watch/Warning	
	HLS	Stand-alone
Flash Flood Watch/Warning/Statement		X
Flood Warning		X
Tornado Warning		X
Inland Tropical Storm or Inland Hurricane Watch/Warning		X
Severe Thunderstorm Warning		X ¹
Coastal Flood Watch/Warning/Statement (CFW)	X ²	X ²
Special Marine Warning		X ³
Severe Weather Statement		X ¹
Marine Weather Statement		X ¹
Special Weather Statement	X	
Surf Zone Forecast/Surf Forecast	X	
High Surf Advisory/Warning (WFO Honolulu)	X	

¹ Can be issued as stand-alone products at the discretion of the WFO. However, their use should be confined to peripheral events, such as outer rainbands, prior to sustained tropical storm or hurricane strength winds

² If no CFW products were issued by the WFO prior to the issuance of a tropical cyclone watch or warning, then no CFW products will be issued tropical cyclone watches or warnings are in effect.

³ WFOs have the option to issue stand-alone special marine warnings (SMW) on an as needed basis. This will primarily occur during watch situations prior to the onset of tropical storm winds impacting a marine zone. In cases of waterspouts, SMWs may be issued anytime during tropical cyclone watch/warning situations.

Complications occur when a CFW product is in effect and tropical cyclone watches and/or warnings are issued. The basic premise is if the threat level of a tropical cyclone product equals or exceeds the threat level of an existing CFW, then the CFW will be discontinued. The following details are further summarized in the matrix below:

- A CFW product is in effect for a Coastal Flood Warning and/or a High Surf Advisory/Warning and a tropical cyclone watch is issued - CFW will **continue** as a stand-alone product along with the HLS product.
- A CFW product is in effect for a Coastal Flood Warning and/or a High Surf Advisory/Warning and a tropical cyclone warning is issued - CFW will be **canceled** and users directed to the HLS for further information on coastal hazards.
- A CFW product is in effect for a Coastal Flood Watch and a tropical cyclone watch or warning is issued - CFW will be **canceled** and users directed to the HLS for further information on coastal hazards.

INITIAL WFO PRODUCT IN EFFECT	SUBSEQUENTLY ISSUED TROPICAL CYCLONE (TC) ADVISORY	CONTINUE CFW	CANCEL CFW	ISSUE HLS
Coastal Flood WATCH (CFW)	TC WATCH/WARNING		X	X
Coastal Flood WARNING (CFW)	TC WATCH	X		X
Coastal Flood WARNING (CFW)	TC WARNING		X	X
High Surf ADVISORY (CFW)	TC WATCH	X		X
High Surf ADVISORY (CFW)	TC WARNING		X	X
High Surf WARNING (CFW) (Pacific, Western Regions Only)	TC WATCH	X		X
High Surf WARNING (CFW) (Pacific, Western Regions Only)	TC WARNING		X	X

Finally, if tropical cyclone advisories are discontinued and coastal hazards are expected behind the departing tropical cyclone, the CFW products will be issued as appropriate.

A.1.3.2. Format. As appropriate, product header options are “Hurricane or Typhoon Local Statement,” “Tropical Storm Local Statement” or “Tropical Depression Local Statement.” All HLSs will contain at least one headline. Prepare each section of the HLS by a content/topic header set off by three dots before and after each header. Prioritize and adjust the order to focus on the greatest threat and the most important information impacting the area.

A.1.4 Essential Contents of Hurricane/Typhoon Local Statements: Some private sector vendors are parsing and scrolling HLS section information. Format consistency that is: ellipses, carriage returns and the exact section headline wording of the HLS information is required. After the headline(s), the first section will always be the NEW INFORMATION section. Subsequent section headlines should be arranged with the most important first. WFOs retain the option to use a non-specific section headline which is not already covered by the other sectional topics. *Any section may be omitted if it is not appropriate for a given situation.*

For the Headlines section, the vendor's software will key in on the singular blank line between the Time/Date line of the Mass News Dissemination Header and the ellipse (...) at the beginning and ending of each headline. For the following sections, the vendor's software will key on a blank line, the section headline as noted below in bold, and ellipse (before and after).

...Headline(s)...

More than one headline allowed with no blank lines in between, each section headline beginning and ending with ellipses

Section headers in bold must be written exactly as noted:

...New Information...

Specific new and vital information which you wish to bring to the attention users.

...Areas Affected...

Details of which counties, parishes, or cities are included in the HLS.

...Watches/Warnings...

Watches and warnings in effect and counties or parishes to which they apply.

...Storm Information...

Present location, movement, and winds. Use the tropical cyclone forecast/advisory as guidance.

...Precautionary/Preparedness Actions...

Short-term precautionary actions and times they should be completed.

This includes any evacuation recommendations as provided or stated by state and/or local authorities. Listing these actions is particularly important once a tropical cyclone watch or warning is announced.

...Storm Surge and Storm Tide...

Storm surge and storm tide (storm surge plus astronomical tide) information, including times various heights are expected, present heights, and their locations. If data exists, a comparison of storm surge heights from previous tropical cyclones should be included. Storm surge information should be forecast as a range (i.e. 18-22 feet with locally higher values to 25 feet) and must agree with tropical cyclone center forecasts as included in the advisories. Include storm tide information because local officials might not have access to tide tables. Reference storm tide forecasts to appropriate datums understood by local authorities. For many portions of the coast, this would be mean sea level although some areas use mean lower low water.

...Winds...

Expected time of onset of tropical storm/hurricane/typhoon force winds. (Use the tropical cyclone forecast/advisory as guidance.) WFOs may provide information about the local

impacts of the expected winds. Give timing of impacts in ranges or general terms such as “afternoon,” “evening,” and so on.

...Probability of Hurricane/Tropical Storm Conditions...

Information on probability of hurricane/typhoon/tropical storm conditions.

...Inland Flooding...

...Tornadoes...

...(Non-specific headline - Substitute appropriate header)...

...Next Update...

Time of next or final statement.

Example:

HURRICANE LOCAL STATEMENT
NATIONAL WEATHER SERVICE XXXXX
1019 AM CDT TUE JUL 15 2003

...HURRICANE ZENIA MOVING ONTO THE MIDDLE TEXAS COAST
NEAR PORT O'CONNOR...

...A HURRICANE WARNING IS IN EFFECT FROM BAFFIN BAY TO HIGH
ISLAND...

...NEW INFORMATION...
TEXT

...STORM SURGE AND STORM TIDE...
TEXT

...WINDS...
TEXT

Wtaaii cccc ddhmm
HLSxxx
stZXXX-XXX>XXX-DDHHMM-

(TROPICAL CYCLONE TYPE) LOCAL STATEMENT
NATIONAL WEATHER SERVICE CITY, STATE
time am/pm time_zone day mon DD YYYY

...HEADLINE...

...Areas Affected...

...New Information...

...Watches/Warnings...

...Storm Information...

...Precautionary/Preparedness Actions...

...Storm Surge and Storm Tide...

...Winds...

...Probability of Hurricane/Tropical Storm Conditions...

...Tornadoes...

...(Substitute appropriate header)...

...Next Update...

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Figure A-1. Hurricane Local Statement Format

A.1.5. Relationship of HLSs to the NOW. The NOW is a stand-alone product focused on conditions impacting the office's CWA for the next 0 to 6 hours. It will complement the HLS by providing critical storm information in the first eight lines.

A.2. Extreme Wind Warning (EWW). *Short duration warnings are issued by WFOs to protect lives and property. WFO forecasters issue short duration EWW products to provide the public with advance notice of the onset of extreme tropical cyclone winds, usually associated with the eyewall of a major (category 3 or higher) tropical cyclone. Extreme Wind Warnings inform the public of the need to take immediate shelter in an interior portion of a well-built structure due to the onset of extreme tropical cyclone winds.*

An EWW for extreme tropical cyclone winds should be issued when both of the following criteria are met:

- *Tropical cyclone is a category 3 or greater on the Saffir Simpson hurricane scale as designated by NHC.*
- *Sustained tropical cyclone surface winds of 100 knots (115 mph) or greater are occurring or are expected to occur in a WFO's county warning area within one hour.*

The warning valid time should be two hours or less. Under rare situations, the valid time may be issued for a 3-hour period. An EWW will not be reissued or extended for the same county or parish during an extreme tropical cyclone event. Forecasters should use good judgment to ensure the valid time of the short duration warning takes into account the geographic size of the county or parish versus the forward speed of the tropical cyclone. Once the EWW for a county or parish has expired, WFOs should use the HLS or NOW products to provide additional information about the status of tropical cyclone winds over a county or parish.

Updated EWWs and amendments are not applicable. WFOs should issue Severe Weather Statements (SVS) to update the status of specific Extreme Wind Warnings. Updated information should include observed wind observations and/or reports of damage when available. Additionally, WFOs may issue SVSs to inform the public when all or portions of an EWW have been canceled or have expired.

WFUS5i cccc ddhhmm
EWWccc
STC001-002-ddhhmm-
/k.aaa.cccc.pp.s.####.yymmddThhnnZB-yymmddThhnnZE/

BULLETIN - EAS ACTIVATION REQUESTED
EXTREME WIND WARNING
NATIONAL WEATHER SERVICE city state
time am/pm time_zone day of the week month dd yyyy

THE NATIONAL WEATHER SERVICE IN city HAS ISSUED AN

* EXTREME WIND WARNING FOR THE ONSET OF SUSTAINED WINDS OF 115 MPH
OR GREATER FOR...

county one in section state (List warned counties)

county two in section state (# Counties will match # counties in UGC Line)

IN ASSOCIATION WITH (Phenomenon/The Event)

* UNTIL hhmm am/pm time_zone (Expiration time of warning)

* AT hhmm am/pm time_zone...(Warning basis statement and forecast impacts)

* THESE EXTREME WINDS WILL AFFECT... (Pathcast Version)

location #1 AROUND hhmm am/pm time_zone...

location #2 AROUND hhmm am/pm time_zone...

OR

LOCATIONS IMPACTED INCLUDE... (Pathcast Version w/o time)

location #1...

location #2...

(Impact Locations are mandatory, either pathcast or no pathcast version listed above)

CALL TO ACTION

LAT...LON (Mandatory list of latitude/longitude points outlining the forecaster-drawn area of
greatest impact)

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FORECASTER NAME/NUMBER (OPTIONAL)

FIGURE A-2. Extreme Wind Warning

A.3. Inland Tropical Storm/Hurricane Watch or Warning (NPW). Coastal and inland WFOs will issue an inland tropical storm watch or warning, or inland hurricane watch or warning, when a tropical cyclone is expected to spread tropical storm or hurricane force winds inland under the non-precipitation weather product NPW. The NPW will be exclusively used for this product's initial issuance, subsequent follow-up, and cancellation. The following WFOs are exempt from this policy and will issue NPWs for high wind watches and/or warnings if tropical storm winds move into their area of responsibility.

Albany, NY	Cleveland, OH
Binghamton, NY	Pittsburgh, PA
Buffalo, NY	State College, PA
Burlington, VT	Wilmington, OH
Charleston, WV	

A.3.1. Mission Connection. Long duration warnings are issued by WFOs to protect lives and property. Non-precipitation watches and warnings provide our users and partners advance notice of hazardous non-precipitation weather events which have the potential to threaten life and property.

A.3.2. Issuance Guidelines.

A.3.2.1. Issuance Criteria. An inland Tropical Cyclone Watch or Warning will be issued when the following criteria are met:

- Watch - WFOs will issue Inland Tropical Storm/Hurricane Watches when tropical storm/hurricane force winds are possible within the watch area within 36 hours.
- Warning - WFOs will issue Inland Tropical Storm/Hurricane Warnings when tropical storm/hurricane force winds are expected within the warning area within 24 hours.
- Coastal Counties/Zones - when the effects of the tropical cyclone can be clearly described to the public and not lead to confusion, inland sections of coastal counties or parishes may be placed under inland tropical storm/hurricane watches or warnings commensurate with NHC tropical cyclone watches or warnings. Coordination will occur with all impacted offices and NHC before the issuance.

A.3.2.2. Issuance Times. Event driven.

A.3.2.3. Valid Time. Watch is valid up to 48 hours after the issuance time. The valid time (event start and end times) is described in the watch headline. A warning is valid up to 36 hours after issuance time. The valid time (event start and end times) is described in the warning headline.

A.3.2.4. Product Expiration Time. Generally 6-8 hours after the issuance time and should coincide with the next expected update or when the event is forecast to end.

A.3.3. Technical Description. NPWs will follow the format and content described in this section.

A.3.3.1. Content.

- **Headline** - A headline will be “Inland Tropical Storm Watch (or Warning)” or “Inland Hurricane Watch (or Warning).”
- **Winds** - Expected time of onset of tropical storm/hurricane/typhoon force winds. (Use the tropical cyclone forecast/advisory as guidance).
- **Impacts** - WFOs may provide information about local impacts of the expected winds. Give timing of impacts in ranges or general terms such as “afternoon,” “evening,” and so on.

A.3.3.2. Updates and Amendments. For those offices issuing inland watches/warnings, NPW product will be updated as conditions warrant. At a minimum, this should be every six hours or after the issuance of a six hourly NHC TCP advisory.

A.3.3.3. Cancellations and Expirations. WFOs will issue NPWs to provide the public, media and emergency management notice that inland tropical storm/hurricane watches or warnings have expired or been cancelled.

A.3.3.4. Relationship of NPW to ZFP/HLS Products. The appropriate forecasts and statements will highlight watches and warnings.

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WWaaii cccc ddhhmm
NPWxxx

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE CITY, STATE
time am/pm time_zone day mon DD YYYY

...<Overview headline statement>...

...<General non-precipitation weather synopsis>...

st Zxxx-xxx>xxx-DDHHMM-
zone-zone-zone
INCLUDING THE CITIES OF...
time am/pm time_zone day mon dd yyyy

...HEADLINE...

TEXT

$$

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Figure A-3. Inland NPW Product Format

A.4. Inland Tropical Storm/Hurricane Watch or Warning for Subtropical Storms. WFOs will issue an inland tropical storm wind watch or warning, or inland hurricane wind watch or warning when a subtropical storm is expected to spread tropical storm or hurricane force winds inland. *Use same procedures as noted in section A.3.*

A.5. Post-Tropical Cyclone Reports (PSH). All WFOs issuing HLSs will prepare post-storm reports. Inland offices issuing inland tropical storm/hurricane wind watches or warnings will also submit reports. Other offices whose CWA's experienced wind gusts greater than 33 knots, flooding, tornadoes, damage, or casualties will also submit reports. A standardized format has been introduced for easier post-processing of the data by end users.

A.5.1. Mission Connection. The PSH product is intended to provide the NHC, NWS Headquarters, the media, the public, and emergency management officials with a record of peak tropical cyclone conditions. This data is then used to formulate other post-event reports, news articles and historical records.

A.5.2. Issuance Guidelines.

A.5.2.1. Issuance Criteria. If HLSs are issued, a PSH will be issued.

A.5.2.2. Issuance Times. Transmit the reports within 5 days following the transmission of the last HLS or inland tropical storm/hurricane wind watches or warnings. Amend reports as needed.

A.5.3. *Technical Description.*

A.5.3.1. Content. *Include the following items in the initial report and in any subsequent updated reports:*

a. Wind data: If the observed peak gusts are greater than 33 knots, report highest sustained surface wind speed (knots) and duration (1-, 2- 8-, or 10-minute average which ever applies), peak gust (knots), and date/times of occurrence in UTC. Specify anemometer height (meters) if other than 10 meters. Report all land-based NOAA, Department of Defense, and Federal Aviation Administration official observing sites (ASOS/AWOS) in the OFFICIAL OBSERVATIONS portion of section A. Report other reliable land-based data collected by government sources or other institutions in the UNOFFICIAL OBSERVATIONS portion of section A. These include reports from stations maintained by the U. S. Coast Guard; state, county, and local governments; universities; private companies; and experimental networks. Report NOAA buoy/Coastal Marine Automated Network (C-MAN) stations, National Ocean Service stations, and trusted private or university observations in, or near, a WFO's marine warning area, in section b. Also list adjusted speeds corrected for instrument type and speed range if known. Data reports from the public are optional. However, NWS offices should encourage these data and include them in the PSH when considered reliable.

b. Pressure data: Report lowest sea level pressure (millibars), and date/time of occurrence (UTC). Report data from all sources given in the wind data section and other stations where significant pressure observations are available. Report pressures less than 1005 mb, with pressure greater than 1005 mb reported as needed or as requested.

c. Storm total rainfall: Report amount (inches) and duration (dates). Report data from all sources given in Section a, and other stations where significant rainfall observations are available. Report storm total rainfalls of 3 inches or more, with amounts less than 3 inches reported as needed or as requested.

d. Inland flooding: Report to include date/times (UTC) and counties/parishes/independent cities of occurrence, along with a brief worded summary, as appropriate.

e. Maximum storm surge and storm tide: Reference storm tide to appropriate datums understood by local authorities. For many portions of the coast, this would be National Geodetic Vertical Datum although some areas use mean lower low water. Report storm tide in feet above the datum, and storm surge/wind waves in feet above the normal, predicted (astronomical) tide level. Identify location and date/time (UTC) of occurrence where possible. Report tides of 1 foot or greater above normal, with tides of less than 1 foot above normal reported as needed or as requested. Report extent of beach erosion as appropriate.

f. Tornadoes: Report times (UTC) and locations, along with a brief description of damage, as appropriate. The reports may be taken from Local Storm Reports (LSR) issued for the event.

g. Storm impacts: Including deaths, injuries, dollar damages, number of people evacuated, etc., per county/parish/independent city as reported by emergency management, trusted media sources, etc.

Please note: For land observations, marine observations, storm total rainfall, and tornadoes, latitude and longitude should be included. The AWIPS software will output the values, in the form *xx.m (-)byy.n*, where

xx = degrees north latitude

m = rounded decimal value for latitude, in tenths of a degree

(-) = negative, or west, longitude, as necessary

b = 100's place, if needed

yy = degrees longitude, zero to 99

n = rounded decimal value for longitude, in tenths of a degree

ACUS72 Kccc ddhhmm

PSHxxx

POST TROPICAL CYCLONE REPORT...(TROPICAL CYCLONE TYPE) (NAME)

NATIONAL WEATHER SERVICE CITY STATE

Time am/pm time_zone day of week mon dd yyyy

TEXT (see paragraph A.10 for specific details)

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Figure A-4. Post-Tropical Cyclone Report Format

A.6. Information for Service Assessments. WFOs will forward a copy of media reports, especially newspaper clippings (online and printed) representative of the event and its impacts. Send reports to the appropriate RH and TPC within 7 days following the issuance of the last product concerning the storm. Reports do not have to include all interviews or radio or television spots concerning the landfall event in each local office's CWA.

A.7 Local Storm Reports (LSR). WFOs will prepare these reports in accordance with LSR instructions (reference NWS Instruction 10-517, available at <http://nws.noaa.gov/directives>).

A.8. Storm Reports. WFOs will prepare these reports in accordance with Storm Data Preparation instruction (Reference NWS Instruction 10-1605).

A.9. Correction Procedures. Tropical cyclone centers and WFOs should correct products using the following format:

WTNT KNHC 161441 CCA
TCDAT1

TROPICAL STORM ARTHUR DISCUSSION NUMBER 8...CORRECTED
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL
11 AM EDT TUE JULY 16 2002

CORRECTED FOR (GIVE REASON)

TEXT FOLLOWS....

CCA - If a second correction is necessary, the "A" becomes a "B" (CCB).
"CORRECTED FOR" is optional but encouraged.

A.9. Procedures for Populating WFO-Generated Wind Forecast Grids for Tropical Cyclone Events. The following are short-term solutions to be followed by all impacted WFOs for populating WFO wind grids for tropical cyclones. Updates to this directive will take place as better methods for populating WFO-generated wind forecasts are integrated into the Interactive Forecast Preparation System.

A.9.1. Wind Speed Values Within the 34 kt Wind Radii

0-24 hours

Use wind forecast from the TCM as guidance for locating the 34-, 50- and 64-kt wind radii to maintain synoptic consistency. Apply local knowledge and mesoscale expertise to produce explicit/deterministic wind speed forecasts for all CWA/MAR grids using a full continuum of values up to the maximum sustained wind value provided by tropical cyclone centers.

25-72 hours

Use wind forecast from the TCM as guidance for locating the 34-, 50- and 64-kt wind radii to maintain synoptic consistency. Extrapolate the 64-kt radii from the 36-hour model guidance (TCMWind tool will do this). Coordinate consensus with NHC and adjacent WFOs. Apply local knowledge and mesoscale expertise to produce explicit/deterministic wind speed forecasts for all CWA/MAR grids using a full continuum of wind speeds up to 100 knots or up to the maximum sustained wind forecast by the NHC if it is less than 100 knots. For 101 kts and above use the capped value of 100 kts for grid points inside the 64 kt wind radii.

73-120 hours

Use forecast from the TCM as guidance for locating the center positions to maintain synoptic consistency. Extrapolate the 64-kt radii, the 50-kt radii and the 34-kt from model guidance (TCMWind tool will do this). Coordinate consensus with NHC and adjacent WFOs. Apply local knowledge and mesoscale expertise to produce explicit/deterministic wind speed forecasts for all CWA/MAR grids using a full continuum of wind speeds up to 64 knots or up to the maximum sustained wind forecast by the NHC if it is less than 64 knots. For 65 kts and above use the capped value of 64 kts for grid points inside the 64 kt wind radii.

121-168 hours

Use traditional guidance and WFO discretion to produce explicit/deterministic wind speed forecasts for all CWA/MAR grids using a full continuum of wind speeds up to 30 kts. The choice for 30 kts avoids potential confusion which can result from the automated rounding of 33 kts to 35 kts when generating graphical wind barbs, and with associated textual formatters which convert kts to miles per hour (then round to the nearest 5 mph).

A.9.2. Wind Speed Values Outside the 34 kt Wind Radii**0-120 hours**

Use deterministic wind speed values.

A.9.3. Wind Direction Values Inside or Outside the 34 kt Wind Radii**0-168 hours**

Use deterministic wind direction values.

A.9.4. Wind Gust Values Inside or Outside the 34 kt Wind Radii. At this time, there is no requirement to produce a gust grids. As an option, if a WFO desires to produce a gust grid it will have to be created with little or no guidance.

A.9.5. Caveat. It is highly recommended the following caveat be placed on all text and graphical products...“Winds in and near tropical cyclones should be used with caution due to uncertainty in forecast track, size, and intensity.”

A.10. Product Examples.

EXAMPLE: HURRICANE LOCAL STATEMENT

WTUS84 KCRP 151519
HLSCR
TXZ230>234-241>247-151815-

HURRICANE LOCAL STATEMENT
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX
1019 AM CDT TUE JUL 15 2003

**...HURRICANE CLAUDETTE MOVING ONTO THE MIDDLE TEXAS COAST
NEAR PORT O'CONNOR...**

**...A HURRICANE WARNING IS IN EFFECT FROM BAFFIN BAY TO HIGH
ISLAND...**

...NEW INFORMATION...

AS OF 1130 PM MONDAY EVENING...EMERGENCY MANAGEMENT OFFICIALS
RECOMMENDED EVACUATIONS OF RESIDENTS OF ARANSAS COUNTY.
ALSO...EVACUATIONS HAVE BEEN RECOMMENDED FOR RESIDENTS AND
NON-RESIDENTS OF PORT ARANSAS. NO OTHER EVACUATIONS HAVE BEEN
REPORTED TO THE NATIONAL WEATHER SERVICE AT THIS TIME.

...AREAS AFFECTED...

THIS STATEMENT RECOMMENDS ACTIONS TO BE TAKEN BY RESIDENTS IN
THE FOLLOWING COUNTIES OF ARANSAS...CALHOUN...KLEBERG...NUECES...
REFUGIO...SAN PATRICIO...BEE...GOLIAD...LIVE OAK...MCMULLEN...JIM
WELLS AND VICTORIA.

...WATCHES/WARNINGS...

A HURRICANE WARNING IS IN EFFECT FOR THE TEXAS COAST FROM BAFFIN
BAY TO HIGH ISLAND. AN INLAND TROPICAL STORM WIND WARNING IS IN
EFFECT FOR BEE...GOLIAD...LIVE OAK...JIM WELLS...MCMULLEN AND
VICTORIA COUNTIES FOR TODAY. AN INLAND TROPICAL STORM WATCH IS IN
EFFECT FOR DUVAL AND LASALLE COUNTIES FOR TONIGHT. A FLASH FLOOD
WATCH IS IN EFFECT FOR TODAY FOR THE COUNTIES OF ARANSAS... BEE...
CALHOUN...GOLIAD...LIVE OAK...MCMULLEN...REFUGIO...SAN PATRICIO AND
VICTORIA.

...STORM INFORMATION...

AT 9 AM CDT...THE CENTER OF HURRICANE CLAUDETTE WAS LOCATED NEAR
LATITUDE 28.5 NORTH AND LONGITUDE 96.1 WEST...OR APPROXIMATELY 20
MILES EAST OF PORT O'CONNOR. MAXIMUM SUSTAINED WINDS ARE NEAR 80

MPH WITH HIGHER GUSTS. CLAUDETTE IS MOVING WEST-NORTHWEST NEAR 10 MPH. A CONTINUED MOVEMENT TOWARDS THE WEST-NORTHWEST IS EXPECTED TODAY. GIVEN THIS FORECAST TRACK...THE EYE OF CLAUDETTE IS EXPECTED TO MOVE ACROSS THE PORT OCONNOR TO PALACIOS AREA AROUND 11 AM. WEAKENING IS EXPECTED AFTER THE EYE OF CLAUDETTE MOVES INLAND.

...PRECAUTIONARY/PREPAREDNESS ACTIONS...

AS OF 1130 PM MONDAY EVENING...EMERGENCY MANAGEMENT OFFICIALS RECOMMENDED EVACUATIONS OF RESIDENTS OF ARANSAS COUNTY. ALSO...EVACUATIONS HAVE BEEN RECOMMENDED FOR RESIDENTS AND NON-RESIDENTS OF PORT ARANSAS. NO OTHER EVACUATIONS HAVE BEEN REPORTED TO THE NATIONAL WEATHER SERVICE AT THIS TIME. RESIDENTS OF SOUTH TEXAS...ESPECIALLY THOSE WHO LIVE IN THE COASTAL COUNTIES FROM KLEBERG TO CALHOUN...SHOULD COMPLETE ALL NECESSARY ACTIONS TO PROTECT LIFE AND PROPERTY.

...STORM SURGE AND STORM TIDE...

AT 9 AM CDT...TIDES WERE APPROXIMATELY 3.5 FEET ABOVE MEAN SEA LEVEL AT BOBHALL PIER...AND 2.5 FEET ABOVE MEAN SEA LEVEL AT PORT OCONNOR. AS CLAUDETTE MOVES ACROSS THE COASTLINE...TIDES WILL CONTINUE TO INCREASE...ESPECIALLY FROM ROCKPORT NORTHWARD.

TIDES ARE EXPECTED TO RISE TO BETWEEN 3 AND 4 FEET ABOVE MEAN SEA LEVEL SOUTH OF ROCKPORT...AND 5 TO 6 FEET ABOVE MEAN SEA LEVEL BETWEEN ROCKPORT AND PORT OCONNOR BY THIS AFTERNOON.

AT 5 FEET MSL...WATER WILL FLOOD MANY STREETS IN LAMAR... ROCKPORT...INGLESIDE...FULTON...ARANSAS PASS...PORT ARANSAS AND PORT OCONNOR. WATER WILL REACH 1/4 MILE INLAND TO THE SOUTHERN PART OF ROCKPORT. PORTIONS OF HIGHWAY 35 BETWEEN ARANSAS PASS AND ROCKPORT WILL BE UNDER 1 FOOT OF WATER. ROADS WEST OUT OF ROCKPORT WILL BE UNDER WATER. BEACH AND HARBOR FACILITIES WILL BE FLOODED AT PORT ARANSAS. AT 4 FEET MSL...THE JFK CAUSEWAY WILL HAVE AROUND 1 FOOT OF WATER OVER IT. THE T-HEADS WILL BE FLOODED. FLOODING IS LIKELY ALONG HIGHWAY 35 FROM ARANSAS PASS TO ROCKPORT. SOME FLOODING IS LIKELY ALONG WATERFRONT FACILITIES AND ROADS THAT ARE NEAR THE WATER ALONG MANY COASTAL COMMUNITIES.

AT 3 FEET MSL...BEACH ROADS WILL BE FLOODED ON PADRE AND MUSTANG SLANDS. THE JFK CAUSEWAY WILL HAVE SOME WATER OVER IT BUT NOT ENOUGH TO CLOSE IT DOWN. HIGH TIDES AT PORT ARANSAS OCCURRED AT

745 AM THIS MORNING AND WILL OCCUR AGAIN AT 817 AM ON WEDNESDAY. HIGH TIDES AT PORT OCONNOR WILL BE AT 259 PM THIS AFTERNOON AND 400 PM ON WEDNESDAY.

...WINDS...

AT 9 AM CDT...THE COAST GUARD REPORTED WINDS OF 30 TO 40 KNOTS FROM THE NORTHWEST AT PORT O'CONNOR. A MESONET SITE IN PORT OCONNOR REPORTED A WIND GUST AT 75 MPH AT 940 AM. WINDS ACROSS THE COASTAL WATERS FROM PORT O'CONNOR AND OUT TO 60 NAUTICAL MILES EAST OF PORT OCONNOR...HAVE INCREASED TO HURRICANE FORCE THIS MORNING.

WINDS OVER INLAND LOCATIONS FROM ROCKPORT TO VICTORIA ARE NORTH-NORTHWEST AROUND 25 TO 35 MPH. AS CLAUDETTE CONTINUES TO MOVE INLAND...WINDS WILL GRADUALLY INCREASE ACROSS THE ENTIRE AREA FROM EAST TO WEST.

TROPICAL STORM FORCE WINDS ARE EXPECTED TO SPREAD ACROSS THE REMAINDER OF THE COASTAL WATERS...PRIMARILY EAST OF PORT ARANSAS...THIS MORNING. WINDS GUSTING TO HURRICANE FORCE WILL MOVE INTO REFUGIO AND ARANSAS COUNTIES AROUND 11 AM CDT. THE TROPICAL STORM FORCE WINDS WILL ADVANCE SOUTHWEST DOWN THE COAST WITH TROPICAL STORM FORCE WINDS ENTERING THE COASTAL BEND NEAR CORPUS CHRISTI AROUND NOON. WIND GUSTS TO HURRICANE FORCE COULD OCCUR THIS AFTERNOON AND EVENING NEAR CORPUS CHRISTI AND REDFISH BAYS AND THE ADJACENT LAND AREAS.

...SEAS AND RIP CURRENTS...

AT 9 AM CDT...SEAS WERE AVERAGING AROUND 8 TO 10 FEET OUT TO AROUND 20 NAUTICAL MILES...14 TO 18 FEET BEYOND 20 NAUTICAL MILES. AS CLAUDETTE MAKES LANDFALL...SEAS WILL INCREASE TO 12 TO 17 FEET OUT TO 20 NAUTICAL MILES...15 TO 20 FEET BEYOND 20 NAUTICAL MILES OFFSHORE THIS MORNING. THESE LARGE SEAS WILL CONTINUE TO PRODUCE VERY ROUGH SURF AND DANGEROUS RIP CURRENTS ACROSS ALL OF THE SOUTH TEXAS BEACHES. ENTERING THE SURF IS STRONGLY DISCOURAGED THROUGH AT LEAST WEDNESDAY.

...INLAND FLOODING...

HEAVY RAINFALL WILL ACCOMPANY CLAUDETTE LATER THIS MORNING INTO THIS EVENING. THE GREATEST POTENTIAL FOR HEAVY RAIN SHOULD BE THIS AFTERNOON THROUGH WEDNESDAY. TOTAL RAINFALL AMOUNTS OF 5 TO 8 INCHES WILL BE POSSIBLE MAINLY TO THE NORTH OF A ROCKPORT TO ENCINAL LINE...WITH 2 TO 4 INCHES POSSIBLE TO THE SOUTH OF THIS LINE. THESE RAINFALL AMOUNTS MAY NEED TO BE REVISED IF THE FORECAST TRACK CHANGES. THIS AMOUNT OF RAINFALL WILL HAVE THE

POTENTIAL TO PRODUCE FLOODING OVER THE NORTHERN PORTIONS OF THE COASTAL BEND AND RIO GRANDE PLAINS AREA.

...NEXT UPDATE...

THE NEXT SCHEDULED STATEMENT WILL BE ISSUED AROUND 1 PM.

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EXAMPLE: SHORT TERM FORECAST (NOWcast)

FPUS71 KMOB 192130

NOWMOB

SHORT TERM FORECAST

NATIONAL WEATHER SERVICE MOBILE AL

0430 PM CDT SAT AUG 19 1995

ALZ051>064-MSZ067-075-076-078-079-192330-

BALDWIN-MOBILE-HANCOCK-HARRISON-JACKSON

.NOW...

...HURRICANE GARY WILL MOVE ACROSS BALDWIN AND MOBILE COUNTIES BY 530 PM...

SUSTAINED WINDS ABOVE 80 MPH WITH HIGHER GUSTS AND TORRENTIAL RAINFALL CAN BE EXPECTED AS THE RAIN BAND MOVES ACROSS. THE RAIN BAND SHOULD WEAKEN SLIGHTLY AS IT MOVES ACROSS CLARKE...WASHINGTON...AND GEORGE COUNTIES BY 6 PM. BUT PEOPLE IN THESE COUNTIES SHOULD EXPECT WIND GUSTS TO NEAR HURRICANE FORCE AND EXTREMELY HEAVY RAINFALL.

SCATTERED AREAS OF MODERATE TO HEAVY RAINFALL WILL CONTINUE ACROSS SOUTHERN ALABAMA AND MISSISSIPPI THROUGH 6 PM. BANDS OF STRONG STORMS WILL MOVE NORTHWESTWARD ACROSS THE AREA. EAST WINDS OF 30-40 MPH AND HEAVY RAIN WILL PERSIST WITH STRONGER WINDS AND HEAVIER RAINFALL NEAR THE RAIN BANDS. TEMPERATURES ACROSS THE REGION WILL REMAIN IN THE 70S.

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EXAMPLE: EXTREME WIND WARNING (EWW)

WFUS52 KTBW 131930
EWWTBW
FLC015-071-132100-
/O.NEW.KTBW.EW.W.0013.040813T1938Z-040813T2100Z/

BULLETIN - EAS ACTIVATION REQUESTED
EXTREME WIND WARNING
NATIONAL WEATHER SERVICE TAMPA BAY - RUSKIN FL
338 PM EDT FRI AUG 13 2004

THE NATIONAL WEATHER SERVICE IN RUSKIN HAS ISSUED AN

* EXTREME WIND WARNING FOR THE ONSET OF SUSTAINED WINDS OF 115 MPH
OR GREATER FOR...
CHARLOTTE COUNTY IN SOUTHWEST FLORIDA
LEE COUNTY IN SOUTHWEST FLORIDA

* UNTIL 500 PM EDT

* AT 335 PM EDT...SURFACE OBSERVATIONS AND NATIONAL WEATHER SERVICE
DOPPLER RADAR INDICATED EXTREME WINDS...ASSOCIATED WITH THE
EYEWALL OF HURRICANE CHARLEY...WERE MOVING ONSHORE NEAR NORTH
CAPTIVA ISLAND. SUSTAINED WINDS IN EXCESS OF 140 MPH...CAPABLE OF
PRODUCING WIDESPREAD DESTRUCTION...CAN BE EXPECTED AS THE EYEWALL
PASSES OVERHEAD. MOVEMENT WAS NORTH NORTHEAST AT 20 MPH.

* THESE EXTREME WINDS WILL AFFECT...
ST. JAMES CITY BY 345 PM
BOKEELIA BY 350 PM
PUNTA GORDA BY 400 PM

THIS IS A DANGEROUS STORM! MOVE INTO AN INTERIOR ROOM AWAY FROM
WINDOWS AND OUTER WALLS. COVER YOUR HEAD AND BODY WITH PILLOWS
OR BLANKETS.

LAT...LON 2672 8226 2644 8213 2702 8174 2702 8207

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EXAMPLE: INLAND HURRICANE WARNING

WWUS45 KHGX 101030
NPWHOU

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE HOUSTON-GALVESTON TX
600 AM CDT FRI SEP 10 1995

...AN INLAND HURRICANE WARNING IN EFFECT FOR SOUTHEAST TEXAS...

HURRICANE FRED...LOCATED 60 MILES SOUTHEAST OF GALVESTON TX AT 6 AM CDT...IS MOVING TO THE NORTH NORTHWEST AT 10 MPH AND IS EXPECTED TO MAKE LANDFALL AROUND NOON CDT ON THE UPPER TEXAS COAST. FRED IS THEN FORECAST TO CONTINUE ON A NORTH NORTHWEST COURSE MOVING ACROSS HOUSTON AND REACHING THE SAN JACINTO NATIONAL FOREST BY LATE AFTERNOON. SUSTAINED WINDS OF 100 MPH WITH GUSTS TO 120 MPH SHOULD BEGIN SWEEPING ACROSS THE UPPER TEXAS COAST BY LATE MORNING.

TXZ177>179-197>199-210>212-102200-
WALKER-SAN JACINTO-POLK-WASHINGTON-GRIMES-MONTGOMERY-
COLORADO-AUSTIN-WALLER-

...INLAND HURRICANE WARNING...

WINDS ARE EXPECTED TO RAPIDLY INCREASE TO 50 TO 60 MPH BY 12 NOON AND 80 MPH WITH GUSTS TO 100 MPH BY MID AFTERNOON. 75 MPH WINDS WITH HIGHER GUSTS ARE LIKELY AS FAR INLAND AS HUNTSVILLE...NAVASOTA...AND LAKE LIVINGSTON BY LATE AFTERNOON.

BE PREPARED FOR NUMEROUS DOWNED TREES AND WIRES. DO NOT CROSS DOWNED WIRES...WHICH MAY STILL BE LIVE.
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TXZ226-227-235-213-200-102200-
WHARTON-FORT BEND-JACKSON-HARRIS-LIBERTY-

...INLAND HURRICANE WARNING...

WINDS FROM WHARTON TO HOUSTON AND LIBERTY ARE EXPECTED TO INCREASE TO 50 TO 60 MPH THIS MORNING AND 90 MPH WITH GUSTS TO NEAR 110 MPH BY MIDDAY...DECREASING TO 50 TO 60 MPH LATE THIS AFTERNOON.

FLYING DEBRIS WILL POSE A MAJOR THREAT TO ALL STRUCTURES IN THE WARNED AREA...ESPECIALLY GLASS FROM HIGH-RISE BUILDINGS IN DOWNTOWN HOUSTON. PEOPLE LIVING IN MOBILE HOMES AND THOSE CONCERNED ABOUT THE ABILITY OF THEIR HOMES TO WITHSTAND HURRICANE WINDS SHOULD MOVE TO A STRONG BUILDING OR SHELTER IMMEDIATELY. BE PREPARED FOR NUMEROUS DOWNED TREES AND WIRES. TAKE SHELTER IN SMALL INTERIOR ROOMS OR REINFORCED STRUCTURES.
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EXAMPLE: POST-TROPICAL CYCLONE REPORT

ACUS72 KTBW
 PSHTBW

POST TROPICAL CYCLONE REPORT...TROPICAL STORM ALBERTO
 NATIONAL WEATHER SERVICE TAMPA BAY AREA - RUSKIN FL
 900 PM EDT TUE JUN 13 2006

COUNTIES INCLUDED: LEVY...CITRUS...HERNANDO...PASCO...HILLSBOROUGH...
 POLK...PINELLAS...MANATEE...SARASOTA...

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

 OFFICIAL OBSERVATIONS...

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

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

KVVG-THE VILLAGES							
28.9	-81.9	1008.1	13/0745	210/024	13/1805	210/036	13/1805
KBKV-BROOKSVILLE							
28.5	-82.5	1006.8	13/0859	210/024	13/1928	210/037	13/1656
KPIE-SAINT PETERSBURG							
27.9	-82.7	1007.1	13/0836	200/035	13/0540	200/044	13/0547
KGIF-WINTER HAVEN							
28.0	-81.7	1009.1	13/0640	220/023	13/1706	220/030	13/1705
KTPA-TAMPA INTERNATIONAL							
28.0	-82.5	1007.8	13/0931	200/029	13/0509 I	220/039	13/0707 I

REMARKS: TAMPA ANEMOMETER STOPPED WORKING AT 13/0800.

UNOFFICIAL OBSERVATIONS...

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

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

CDRF1 CEDAR KEY							
29.1 -83.0		1004.1	13/1100	185/036 02/10	13/0830	180/048	13/0900
PTRF1 PORT RICHEY							
28.3 -82.7		1005.4	13/1205 I	210/029 01/05	13/1154	220/035	13/1200
VENF1 VENICE							
27.1 -82.6		1005.6	13/0705	209/036	13/0610	210/046	13/0637

REMARKS: PRESSURE SENSOR AT PORT RICHEY STOPPED WORKING AT 13/1245.

B. MARINE OBSERVATIONS...

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

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

42036 100 NM WEST OF BAYPORT							
28.5 -84.5		1008.5	13/0905	280/035 05/08	13/1040	080/045	12/1050
42013 30 NM WEST OF VENICE							
25.9 -85.9		1003.7	13/1040	170/029 03/10	12/2210	200/035	13/0310 I
42003 210 NM W OF CAPTIVA ISLAND							
25.9 -85.9		1005.6	13/1350	196/038	12/1350	160/049	12/0516

REMARKS: WIND SENSOR AT USF COMPS BUOY 42013 STOPPED WORKING AT 13/0311.

C. STORM TOTAL RAINFALL FROM 0000 UTC JUNE 12 UNTIL 2359 UTC JUNE 13 2006

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

SUWANNEE 29.2 -83.1	LEVY	SUWF1	4.23
CHIEFLAND 29.5 -82.9	LEVY	CHIF1	3.67
WILLISTON 29.4 -82.5	LEVY	WLSF1	4.53
THE VILLAGES 28.9 -81.9	SUMTER	KVVG	0.87

COUNTY ROAD CREW OBSERVED THE TORNADO NEAR HIGHWAY 62.

2 E BARTOW POLK 12/0809 EF0
27.9 -81.8

TORNADO OBSERVED 1 MILE EAST OF BARTOW AIRPORT.

1 S ARCADIA DESOTO 12/0658 EF0
27.2 -81.9

TORNADO OBSERVED 1 MILE SOUTH OF ARCADIA.

REMARKS: NONE.

G. STORM IMPACTS BY COUNTY...

COUNTY DESCRIPTION	DEATHS	INJURIES	EVACUATIONS
LEVY 20 HOMES IN YANKEETOWN RECEIVED FLOOD DAMAGE AS TWO FEET OF WATER COVERED THE ROAD DOWNTOWN. WATER ALSO CLOSED NEAR SHORE AREAS OF HIGHWAY 40 AND 24.	0	0	100
CITRUS SURGE FLOODING NEAR HOMOSSASSA PUT 3 FEET OF WATER INTO ONE RESTAURANT AND DAMAGED 20 HOMES. TWO PEOPLE WHO DID NOT EVACUATE HAD TO BE RESCUED...ONE IN HOMOSASSA AND THE OTHER IN CRYSTAL RIVER. FORT ISLAND TRAIL WAS COVERED WITH 4 FEET OF WATER.	0	0	25
PASCO 4 FOOT SURGE UP AND DOWN THE COUNTY COAST LINE. WAS NOT HIGH ENOUGH TO FLOOD PROPERTY...EVEN AT HIGH TIDE.	0	0	0
HILLSBOROUGH A COUPLE OF TREES ON HOUSES. FRESH WATER FLOODING AND BAY OVERSPRAY CLOSED PARTS OF BAY SHORE BOULEVARD FOR A TIME.	0	0	0
MANATEE NO PROBLEMS.	0	0	0
SARASOTA NO PROBLEMS.	0	0	0

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Legend:

- I-Incomplete Data
- E-Estimated

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MCMICHAEL