Department of Commerce • National Oceanic & Atmospheric Administration • National Weather Service

NATIONAL WEATHER SERVICE INSTRUCTION 10-601
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Operations and Services
Tropical Cyclone Weather Services Program, NWSPD 10-6

TROPICAL CYCLONE PRODUCTS

NOTICE: This publication is available at: http://www.nws.noaa.gov/directives/.

OPR: W/OS21 (T. Schott) **Certified by:** W/OS21 (T. Pierce)
Type of Issuance: Emergency

SUMMARY OF REVISIONS: This directive supersedes NWS Instruction 10-601, dated July 27, 2009. The following revisions were made to this directive:

Sec 1.1	Updates TCP for new Storm Summary Block
Sec 1.1	The Aviation Tropical Cyclone Advisory, Tropical Cyclone Watch/Warning Graphic, Cumulative Wind Distribution, Tropical Cyclone Wind Field Graphic, Maximum Wind Speed Probability Table, and Tropical Cyclone Storm Surge Probabilities products were moved from Section 6 and deemed more appropriate for inclusion in Section 1.
Sec 1.1.3.3.b	Revises NHC watch and warning issuance times
Sec 6.3.3.2	Begins Graphical Tropical Weather Outlook for CPHC, and provides NHC and CPHC probabilistic genesis forecasts to nearest 10 percent
Sec 6.12	Begins CPHC Tropical Cyclone Surface Wind Field graphic
Sec 7.1.3.4	Adds order in watches and warnings listed in Overview Block of the Hurricane Local Statement (HLS) and adds WINDS AND SEAS and TORNADOES AND WATERSPOUTS in marine segments of HLS

Changes to product examples in Appendix:

Updates Tropical Weather Outlook (TWO) for NHC and CPHC, for probabilistic genesis forecasts to nearest 10 percent

Modifies example of Special Tropical Weather Outlook

Adds new TCU product examples

Updates to all TCP products (Tropical Cyclone Public Advisory, Tropical Cyclone Intermediate Public Advisory, Tropical Cyclone Special Public Advisory, Subtropical Cyclone Public Advisory) for the new Storm Summary block

Adds new TCM product example

Updates HLS example for 2010

signed May 26, 2010

David B. Caldwell Date
Director, Office of Climate,
Water, and Weather Services

Tropical Cyclone Products

1. Tropical Cyclone Forecast and Advisory Products.

NOTE: Weather Service Office (WSO) Pago Pago, American Samoa, is exempt from the policies of this directive. This is due to international agreements with the country of Samoa. These agreements allow for the exchange of forecasts, watches and warnings in format and language suitable to both countries. Also, WSO Pago Pago does not have an Automated Tropical Cyclone Forecast (ATCF) system or the Advanced Weather Interactive Processing System (AWIPS).

Refer to Appendix A for tropical cyclone product examples.

1.1 Tropical Cyclone Public Advisories (TCP). The TCP is the primary tropical cyclone information product issued to the public. The National Hurricane Center (NHC), as a part of the Tropical Prediction Center (TPC); the Central Pacific Hurricane Center (CPHC); and Weather Forecast Office (WFO) Tiyan, Guam, will issue TCPs.

1.1.1 Mission Connection. The TCP is the primary tropical cyclone product issued to the public. The TCP provides critical tropical cyclone watch, warning, and forecast information for the protection of life and property.

1.1.2 Issuance Guidelines.

1.1.2.1 Creation Software. ATCF system and the AWIPS.

1.1.2.2 Issuance Criteria. In the Atlantic and east Pacific, NHC will issue TCPs for all tropical cyclones (except for certain tropical depressions over land, for which HPC issues a similar product under the TCP header. See Section 6.6.) In the central Pacific CPHC will issue TCPs for all tropical cyclones. In the western Pacific, WFO Guam will issue public advisories using Joint Typhoon Warning Center (JTWC) forecast products as guidance for all tropical cyclones within their Area of Responsibility (AOR) from 130°E to 180° between the Equator and 25°N.

Issue the initial advisory when data confirm a tropical cyclone has developed. The title of the advisory will depend upon the intensity of the tropical cyclone as follows: A tropical depression advisory refers to a tropical cyclone with 1-min sustained surface winds up to 33 knots (38 mph); a tropical storm advisory for tropical cyclones with 1-min sustained surface winds 34 to 63 knots (39 to 73 mph); a hurricane/typhoon advisory for tropical cyclones with 1-minute sustained surface of 64 knots (74 mph) or greater.

Public advisories will be discontinued when the tropical cyclone:

a. Ceases to be a tropical cyclone (e.g., dissipates, becomes a remnant low, extratropical, etc.)

b. Is centered over land, is below tropical storm strength, and is not forecast to move back over water as a tropical cyclone, and no coastal tropical cyclone watches or warnings are in effect. See Section 6.6 for information on TCPs issued by HPC.

c. For Guam, when the tropical cyclone moves out of the WFO AOR.

1.1.2.3 Issuance Time.

a. Public Advisories. NHC and CPHC will issue Public Advisories at 0300, 0900, 1500, and 2100 Coordinated Universal Time (UTC) with valid position times corresponding to the advisory time. WFO Guam issuance times are 0400, 1000, 1600, and 2200 UTC.

b. Intermediate Public Advisories. Intermediate Public Advisories will be issued at 2- to 3-hourly intervals between scheduled advisories (see times of issuance below). Issue 3-hourly intermediate advisories whenever 1) a coastal tropical storm or coastal hurricane/typhoon watch/warning is in effect, or 2) a tropical cyclone is over land at tropical storm strength or greater. Issue 2-hourly intermediates whenever tropical storm or hurricane/typhoon warnings are in effect and coastal radars are able to provide responsible tropical cyclone centers with a reliable hourly center position.

Three hourly issuances...TPC/CPHC at 0000, 0600, 1200, and 1800 UTC. WFO Guam at 0100, 0700, 1300, and 1900 UTC.

Two hourly issuances...TPC/CPHC at 2300, 0100, 0500, 0700, 1100, 1300, 1700, and 1900 UTC. WFO Guam at 0000, 0200, 0600, 0800, 1200, 1400, 1800, and 2000 UTC.

The content of intermediate advisories is identical to the content of regular advisories.

1.1.2.4 Valid Time. TCPs are valid from the time of issuance until the next scheduled issuance or update.

1.1.2.5 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.

1.1.3 Technical Description. TCPs will follow the format and content described in this section.

1.1.3.1 Universal Geographic Code (UGC) Type. Not applicable.

1.1.3.2 Mass News Disseminator (MND) Header. The TCP MND header block product type line is "(TROPICAL CYCLONE TYPE) (NAME) ADVISORY NUMBER XX."

1.1.3.3 Content. The TCP comprises five sections: Summary, Watches and Warnings, Discussion and 48-hour Outlook, Hazards, and Next Advisory. Each section of the TCP begins with a specific header text string (see Appendix A). An optional lead statement or headline may precede the Summary section to emphasize significant aspects of the tropical cyclone. The forecaster's name should appear at the end of the advisory.

a. Summary. This section follows a fixed format, containing lines for the location, geographical reference(s), maximum winds, direction of movement, and minimum pressure. The section will always contain at least one geographical reference, but not more than two. Geographical reference lines begin with the keyword ABOUT. In the summary section, all directions are abbreviated (e.g., N, NNE, NE, ENE, E, etc.) If the forward speed is zero, the motion will be given as STATIONARY. In the summary section header, UTC time will always be given with four characters (e.g., 0300 UTC). No other numerical values in this section will appear with leading zeros.

b. Watches and Warnings. This section lists coastal watches and warnings in effect for hurricane/typhoon and tropical storm conditions. It may also include watch/warning definitions and call to action statements as described below. Whenever watches or warnings are issued, continue in effect, or are discontinued, the Watches and Warnings section will contain the following two subsections:

CHANGES WITH THIS ADVISORY...

SUMMARY OF WATCHES AND WARNINGS IN EFFECT...

List changes to watches and warnings since the last TCP or Tropical Cyclone Update (TCU) in paragraph form, one change per paragraph.

Summarize active watches and warnings as a bulleted list, grouped by warning type. Each grouping will begin with a statement similar to `A HURRICANE WARNING IS IN EFFECT FOR…`. Each watch or warning segment that follows will appear on a separate line beginning with an asterisk. However, watches or warnings that encompass entire islands or jurisdictions may be grouped together as a single segment, e.g.:

A TROPICAL STORM WARNING IS IN EFFECT FOR...

* ANTIGUA...BARBUDA...ANGUILLA...AND ST. MARTIN

A TROPICAL STORM WARNING IS IN EFFECT FOR...

* THE CUBAN PROVINCES OF GUANTANAMO AND HOLGUIN

NHC issues tropical storm/hurricane watches/warnings for the Atlantic, Pacific, and Gulf of Mexico coasts of the continental United States, the US Virgin Islands, and Puerto Rico.

CPHC and WFO Guam issue tropical storm/hurricane/typhoon watches if tropical storm/hurricane/typhoon conditions are possible along the coast including the islands of Hawaii, northwest Hawaiian Islands, Johnston Atoll, Guam, Northern Mariana Islands and selected points in the Micronesian countries.

Watches are issued when tropical storm/hurricane/typhoon conditions are possible within

the watch area. Tropical storm/hurricane/typhoon watches are issued 48 hours in advance of the anticipated onset of tropical storm force winds.

Warnings are issued when tropical storm/hurricane/typhoon conditions are expected somewhere within the warning area. Both tropical storm and hurricane warnings are issued 36 hours in advance of the anticipated onset of tropical storm force winds. Typhoon warnings are issued by WFO Guam 24 hours in advance of the anticipated onset of tropical storm force winds.

Whenever possible, a watch should precede a warning. Once a watch is in effect, it should either be replaced by a warning or remain in effect until the threat of the tropical cyclone conditions has passed. A hurricane/typhoon watch and a tropical storm warning can be in effect for the same section of coast at the same time. Tropical storm warnings may be issued on either side of a hurricane/typhoon warning area.

If tropical storm force winds directly associated with a tropical cyclone are expected to affect an area for which a gale warning is already in place, a tropical storm warning may be issued, replacing the gale warning, at the discretion of the hurricane specialist after coordinating with the impacted WFO(s).

It is not normally advantageous to step down warnings for tropical cyclones. Do not use intermediate advisories to issue U.S. tropical cyclone watches or warnings. Intermediate advisories can be used to clear all, or parts of, a watch or warning area.

When a watch or warning is introduced for a new major geographical area, the watch/warning section should contain a definition of the watch or warning. These definitions may also be included at other times. The definitions will appear after the list of active watches and warnings in effect. Other statements (e.g., “INTERESTS IN THE LEEWARD ISLANDS SHOULD MONITOR THE PROGRESS OF BILL.”) may also appear after the list of active watches and warnings.

When watches or warnings are in effect for the United States, include the following statement: “FOR STORM INFORMATION SPECIFIC TO YOUR AREA...INCLUDING POSSIBLE INLAND WATCHES AND WARNINGS...PLEASE MONITOR PRODUCTS ISSUED BY YOUR LOCAL NWS WEATHER FORECAST OFFICE.”

When watches or warnings are in effect for areas outside the United States, include the following statement: “FOR STORM INFORMATION SPECIFIC TO YOUR AREA OUTSIDE OF THE UNITED STATES…PLEASE MONITOR PRODUCTS ISSUED BY YOUR NATIONAL METEOROLOGICAL SERVICE.”

When a tropical cyclone watch is in effect and a tropical cyclone is either approaching or departing and conditions warrant, forecasters may include the statement “A SMALL CRAFT ADVISORY IS IN EFFECT. SMALL CRAFT SHOULD STAY IN PORT". When discontinuing tropical cyclone warnings for an area where small craft advisories are to remain in effect, use the following statement: “SMALL CRAFT ADVISORIES REMAIN IN EFFECT FOR PORTIONS OF THE COAST. PLEASE MONITOR

PRODUCTS ISSUED BY YOUR LOCAL NWS FORECAST OFFICE."

c. Discussion and Outlook. This is a free text section that describes the current location and motion, maximum winds, extent of hurricane- and tropical-storm–force winds, and minimum pressure. It will provide a general outlook for the track and intensity of the cyclone over the next 24-48 hours.

Include the location of the center of the tropical cyclone by its latitude and longitude. When the center of the tropical cyclone is over land, give its position referencing the island, state or country in which it is located and in respect to some well-known city, if appropriate.

Movement forecasts apply to the tropical cyclone's center. Give the present movement to 16 points of the compass. Include a generalized 48-hour forecast of movement using wording that appropriately conveys the uncertainties in the track forecast (e.g., "could move near or over…"). Make landfall forecasts of the center with caution to avoid giving the public any false sense of security. Broad statements for areas that could be affected beyond 48 hours may also be included (e.g., "It is too soon to determine if Jeanne will eventually affect any land areas").

Give the estimated maximum 1-minute sustained surface wind speed rounded to the nearest 5 mph. Provide a generalized intensity forecast out to 48 hours, using wording that appropriately conveys the uncertainties in the intensity forecast. The forecast can be conveyed in terms of the expected change compared to the initial intensity (e.g., weakening, strengthening, little change), and/or a general categorical description (e.g., depression, storm, hurricane, major hurricane) of the forecast intensity, with appropriate qualifiers (e.g., "could become"). Broad statements for areas that could be affected beyond 48 hours may also be included (e.g., "Katrina could become a dangerous hurricane in the Gulf of Mexico in 2 to 3 days).

Provide the area (or radius) of both tropical storm and hurricane/typhoon force winds. Provide central pressure values in millibars and inches. (NHC and CPHC)

d. Hazards. This section of the TCP describes the threats of a tropical cyclone. The information in this section will be given in descending order of importance or urgency. Most paragraphs will begin with one of the following keywords: `STORM SURGE`, `WIND`, `RAINFALL`, `TORNADOES`, `SURF`, or `OTHER`. Discuss storm hazards whenever warnings are in effect, or earlier if possible and appropriate.

Surge: Storm surge forecasts should highlight areas along the coast and within bays that are likely to experience dangerous flooding from storm surge. When possible, timing should be estimated or should be referenced to storm position, e.g. "as the hurricane is making landfall," or "as strong winds turn to the southwest." Wave information should be included for the outer coastline (all coastlines for Pacific Region locations) when possible.

For storm surges affecting the United States, NHC will generally reference storm surge

information/forecasts as height above ground level, using a statement similar to the following:

A DANGEROUS STORM SURGE WILL RAISE WATER LEVELS BY AS MUCH AS [HEIGHT] FEET ABOVE GROUND LEVEL ALONG THE IMMEDIATE COAST NEAR AND TO THE [N/S/E/W] OF WHERE THE CENTER MAKES LANDFALL. THE SURGE COULD PENETRATE AS FAR INLAND AS ABOUT [DISTANCE] MILES FROM THE SHORE WITH DEPTH GRADUALLY DECREASING AS THE WATER MOVES INLAND. NEAR THE COAST…THE SURGE WILL BE ACCOMPANIED BY LARGE AND DESTRUCTIVE WAVES.

Reference storm tide rather than storm surge within 12 hours or so of landfall, when the time of landfall relative to the time of high or low tide can be determined with confidence, using a statement similar to the following:

A DANGEROUS STORM TIDE WILL RAISE WATER LEVELS BY AS MUCH AS [HEIGHT] FEET ABOVE GROUND LEVEL ALONG THE IMMEDIATE COAST NEAR AND TO THE [N/S/E/W] OF WHERE THE CENTER MAKES LANDFALL. THE SURGE COULD PENETRATE AS FAR INLAND AS ABOUT [DISTANCE] MILES FROM THE SHORE WITH DEPTH GRADUALLY DECREASING AS THE WATER MOVES INLAND. NEAR THE COAST…THE SURGE WILL BE ACCOMPANIED BY LARGE AND DESTRUCTIVE WAVES.

Storm surge statements for areas outside of the United States will not be expressed in terms of inundation above ground level, but will continue to be referenced to normal tide levels.

Surf: On a case by case basis, NHC will discuss with the affected continental United States (CONUS) WFOs on the hurricane hotline coordination call whether rip currents and/or dangerous surf will be referenced. If agreement is reached to reference rip currents and/or dangerous surf, NHC will generally use wording such as:

SWELLS GENERATED BY [STORM] ARE AFFECTING PORTIONS OF THE COAST OF [LOCATIONS]. THESE SWELLS ARE LIKELY TO CAUSE LIFE-THREATENING SURF AND RIP CURRENT CONDITIONS. PLEASE CONSULT PRODUCTS FROM YOUR LOCAL WEATHER FORECAST OFFICES FOR MORE INFORMATION.

Wind: When watches or warnings are in effect, give the expected times of onset of tropical storm and hurricane/typhoon force winds along the coast in general terms, such as “this afternoon” or “tonight.” Such statements should be general in nature and appropriately reflect forecast uncertainties.

Rainfall: NHC, CPHC, and WFO Guam will provide quantitative rainfall forecasts generally only when warnings are in effect. Identify the geographical area(s) at greatest risk, including inland areas. Include an estimate of the range of area-average amounts expected within the specified area(s), as well as an upper bound on the maximum spot values expected. In general, use storm-total values.

Tornadoes: When appropriate, provide information on the threat of tornadoes. Identify the geographic area(s) at greatest risk.

Other: When appropriate, highlight the inland impacts of tropical cyclones. This includes the threat of strong winds, heavy rainfall, flooding, and tornadoes. Mention actual occurrences of tornadoes, floods, and high winds and reference supporting warnings and statements from WFOs.

e. Next Advisory. This section identifies the scheduled issuance time and office responsible for the next regular tropical cyclone advisory and any intervening intermediate advisories. On a last advisory, identify the issuing office and product where subsequent information on the system remnants can be found.

When the Hydrometeorological Prediction Center (HPC) is going to issue the next TCP on a system for which NHC has been providing TCPs, the final TCP from the NHC will carry a statement similar to…"THIS IS THE LAST PUBLIC ADVISORY ISSUED BY THE NATIONAL HURRICANE CENTER ON THIS SYSTEM. FUTURE INFORMATION ON THIS SYSTEM CAN BE FOUND IN PUBLIC ADVISORIES ISSUED BY THE HYDROMETEOROLOGICAL PREDICTION CENTER…UNDER AWIPS HEADER TCPATn AND WMO HEADER WTNT3n KWNH…BEGINNING AT XX AM/PM EDT."

When the Ocean Prediction Center or Tropical Analysis Forecast Branch (TAFB) is going to issue products on a tropical system which has been declared post-tropical by NHC, NHC's last TCP should carry a statement similar to..."THIS IS THE LAST PUBLIC ADVISORY ISSUED BY THE NATIONAL HURRICANE CENTER ON XXX. FUTURE INFORMATION ON THIS SYSTEM CAN BE FOUND IN THE HIGH SEAS BULLETINS ISSUED BY THE NATIONAL WEATHER SERVICE…UNDER AWIPS HEADER HSFAT1 AND WMO HEADER FZNT01 KWBC AND THE MARINE WEATHER DISCUSSION UNDER AWIPS HEADER MIMATN AND WMO HEADER AGNT40 KWNM BEGINNING AT XX AM/PM EDT.

For a tropical cyclone moving east to west across the international dateline, CPHC will insert at the end of their last advisory/forecast, "THIS IS THE LAST BULLETIN ISSUED BY THE CENTRAL PACIFIC HURRICANE CENTER. THE NEXT BULLETIN WILL BE ISSUED BY THE RSMC TOKYO. FOR U.S. INTERESTS, SEE THE PUBLIC ADVISORIES ISSUED BY THE U.S. NWS WEATHER FORECAST OFFICE GUAM AND DOD WARNINGS ISSUED BY THE JOINT TYPHOON WARNING CENTER."

For a tropical cyclone moving out of the WFO Guam AOR, WFO Guam will insert at the end of their last advisory/forecast, "THIS IS THE LAST BULLETIN ISSUED BY THE NWS WEATHER FORECAST OFFICE GUAM ON (storm name). FOR CONTINUED INFORMATION ON (storm name)…SEE JTWC BULLETINS UNDER WMO HEADER WTPN3n PGTW OR RSMC TOKYO BULLETINS UNDER WMO HEADER WTJP3n RJTD."

f. General. Times in advisories should be local time of the affected area; however, local time and UTC should be used when noting the storm's location. For WFO Guam, use Chamorro Standard Time for all local times. All advisories will use statute miles and statute miles per hour. TPC, CPHC and WFO Guam, at their discretion, may use nautical miles/knots in parentheses immediately following statute miles/mph. TPC advisories should include the metric units of kilometers and kilometers per hour following the equivalent English units.

1.1.3.4 Format. This product is available in industry standard encoding and languages, and may include, but not limited to, American Standard Code for Information Interchange (ASCII), Extensible Markup Language (XML), Wireless Markup Language (WML) and HyperText Markup Language (HTML).

```
WTaaii cccc ddhhmm
TCPxxx

BULLETIN
(TROPICAL CYCLONE TYPE) (NAME) ADVISORY NUMBER XX.
(ISSUING OFFICE CITY STATE)  BBCCYYYY
time am/pm time_zone day of week mon dd yyyy

...HEADLINE...

TEXT
$$

FORECASTER NAME
```

Figure 1. Tropical Cyclone Public Advisories Format
See complete example in Appendix A.

NOTE: As part of the header, a coded string will be appended at the end of the "ISSUING OFFICE CITY STATE" line (Example: NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL BBCCYYYY)

Format:

where:	(BB) is the basin AL - North Atlantic, EP - East Pacific, CP - Central Pacific WP – western North Pacific
where:	(CC) is the cyclone number (01, 02, 03,...49)
where:	(YYYY) is the 4 digit year.

Note: WFO Guam will normally include the JTWC cyclone number in parentheses along with the name, once it is provided by RSMC Tokyo.

1.2 Tropical Cyclone Forecasts/Advisories (TCM). NHC and CPHC will prepare TCMs for all tropical cyclones within their area of responsibility.

1.2.1 Mission Connection. The TCM provides critical tropical cyclone watch, warning, and forecast information for the protection of life and property.

1.2.2 Issuance Guidelines.

1.2.2.1 Creation Software. ATCF system.

1.2.2.2 Issuance Criteria. TCM is issued any time a routine or special TCP product is issued.

1.2.2.3 Issuance Times. Issue advisories at 0300, 0900, 1500, and 2100 UTC and with all special advisories.

1.2.2.4 Valid Time. TCMs are valid from the time of issuance until the next scheduled issuance or update.

1.2.2.5 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.

1.2.3 Technical Description. TCMs will follow the format and content described in this section.

1.2.3.1 UGC Type. Not applicable.

1.2.3.2 Mass News Disseminator Header. The TCM MND header block product type line is "(TROPICAL CYCLONE TYPE) (NAME) FORECAST/ADVISORY NUMBER XX

1.2.3.3 Content. TCMs will contain appropriate information as shown in appendix A in a standard format. All forecast advisories will contain 12-, 24-, 36-, 48-, 72-, 96- and 120 hour forecast positions and 1-minute surface wind speeds (intensity) rounded to the nearest 5 knots. Also they will include 34- and 50-knot (four-quadrant) wind speed radii in nautical miles through 72 hours and 64-knot wind speed radii at 12-, 24-, and 36-hours. No position or wind speed will accompany the forecast of "dissipated." A standard statement indicating the uncertainty associated with the 96- and 120-hour forecast positions and forecast wind speeds will precede those two forecasts.

1.2.3.4 Format. This product is available in industry standard encoding and languages, and may include, but not limited to, ASCII, XML, WML and HTML.

```
WTaa2i cccc ddhhmm
TCMxxx

(TROPICAL CYCLONE TYPE) (NAME) FORECAST/ADVISORY NUMBER XX.
(ISSUING OFFICE CITY STATE)  BBCCYYYY
time UTC day of week mon dd yyyy

TEXT
$$

FORECASTER NAME
```

Figure 2. Tropical Cyclone Forecast/Advisories Format
See complete example in Appendix A.

NOTE: As part of the header, a coded string will be appended at the end of the "ISSUING OFFICE CITY STATE" line. (Example: NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL BBCCYYYY)

Format:
where: (BB) is the basin AL - North Atlantic, EP - East Pacific, or CP - Central Pacific
where: (CC) is the cyclone number (01, 02, 03,...49)
where: (YYYY) is the 4 digit year.

1.3 Tropical Cyclone Discussions (TCD). NHC and CPHC issue TCDs to explain forecaster's reasoning behind analysis and forecast of the tropical cyclone.

1.3.1 Mission Connection. The TCD is a primary tropical cyclone product explaining forecaster's reasoning behind analysis and the forecast for a tropical cyclone. It also provides coordinated 12-, 24-, 36-, 48-, 72-, 96-, and 120-hour tropical cyclone forecast positions and maximum sustained wind speed forecasts; other meteorological decisions; and plans for watches and warnings.

1.3.2 Issuance Guidelines

1.3.2.1 Creation Software. ATCF system.

1.3.2.2 Issuance Criteria. TCD is issued any time a routine or special TCP product is issued.

1.3.2.3 Issuance Times. Issue advisories at 0300, 0900, 1500, and 2100 UTC and with all special advisories

1.3.2.4 Valid Time. TCDs are valid from the time of issuance until the next scheduled issuance or update.

1.3.2.5 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.

1.3.3 Technical Description. TCDs will follow the format and content described in this section.

1.3.3.1 UGC Type. Not applicable.

1.3.3.2 Mass News Disseminator Header. The TCD MND header block product type line is "(TROPICAL CYCLONE TYPE) (NAME) DISCUSSION NUMBER XX

1.3.3.3 Content. Discussions include prognostic reasoning; objective techniques employed; coordinated 12-, 24-, 36-, 48-, 72-, 96- and 120-hour tropical cyclone forecast points. No position or wind speed will accompany the forecast of "dissipated." Also provide maximum sustained wind speed forecasts for each forecast point; other meteorological decisions; and plans for watches and warnings.

1.3.3.4 Format. This product is available in industry standard encoding and languages, and may include, but is not limited to, ASCII, XML, WML and HTML.

```
WTaa4i cccc ddhhmm
TCDxxx

(TROPICAL CYCLONE TYPE) (NAME) DISCUSSION NUMBER XX.
(ISSUING OFFICE CITY STATE)   BBCCYYYY
time am/pm time_zone day of week mon dd yyyy

TEXT
$$

FORECASTER NAME
```

Figure 3. Tropical Cyclone Discussion Format
See complete example in Appendix A.

NOTE: As part of the header, a coded string will be appended at the end of the "ISSUING OFFICE CITY STATE" line. (Example: NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL BBCCYYYY)

Format:
where: (BB) is the basin AL - North Atlantic, EP - East Pacific, or CP - Central Pacific
where: (CC) is the cyclone number (01, 02, 03,...49)
where: (YYYY) is the 4 digit year.

1.4 Tropical Cyclone Updates (TCU).

1.4.1 Mission Connection. The TCU is an event-driven product which provides users with timely, succinct information on significant changes to tropical cyclone conditions.

1.4.2 Issuance Guidelines.

1.4.2.1 Creation Software. ATCF system.

1.4.2.2 Issuance Criteria. TCUs are issued to inform users of unexpected changes in a tropical cyclone, such as to convey a significant change in the intensity, and/or to alert users a special advisory is about to be issued. The TCU may also be used to announce changes to international watches or warnings made by other countries, and to cancel U.S. watches or warnings. A TCU should only be used to issue a U.S. watch or warning if that TCU precedes a special advisory that will contain the same watch/warning information, and indicates the special advisory will be issued shortly. A TCU may also be used to provide timely information of an unusual nature, such as an announcement of the time and location of landfall.

1.4.2.3 Issuance Times. The TCUs are issued on an event-driven basis.

1.4.2.4 Valid Time. TCUs are valid at time of issuance until a subsequent TCU is issued or until the next scheduled or special TCP.

1.4.2.5 Product Expiration Time. Not applicable.

1.4.3 Technical Description. TCUs will follow the format and content described in this section.

1.4.3.1 UGC Type. Not applicable.

1.4.3.2 Mass News Disseminator Header. The TCU MND header block product type line is "(TROPICAL CYCLONE TYPE) (NAME) UPDATE"

1.4.3.3 Content. The TCU is a brief alphanumeric text product using a block paragraph format. CPHC and NHC base the information contained within the TCU on latest available data from all sources with special reliance on aircraft reconnaissance and satellite data.

When a TCU is issued to change the status of a tropical cyclone (e.g., from a tropical storm to a hurricane), or to update storm intensity, location, or motion information, the TCU will include a storm summary section identical in format to the storm summary section found in the TCP. A TCU may be issued without a storm summary section to provide advance notice that significant changes to storm information will be conveyed shortly, either through a subsequent TCU or through a Special Advisory. TCUs issued to convey changes to watches or warnings will not require a storm summary section.

1.4.3.4 Format. This product is available in industry standard encoding and languages, and may include, but not limited to, ASCII, XML, WML and HTML.

```
WTaa6i cccc ddhhmm
TCUxxx

(TROPICAL CYCLONE TYPE) (NAME) UPDATE
(ISSUING OFFICE CITY STATE)   BBCCYYYY
time am/pm time_zone day of week mon dd yyyy

TEXT
```

Figure 4. Tropical Cyclone Update Format
See complete example in Appendix A.

NOTE: As part of the header, a coded string will be appended at the end of the "ISSUING OFFICE CITY STATE" line. (Example: NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL BBCCYYYY)

Format:
where: (BB) is the basin AL - North Atlantic, EP - East Pacific, or CP - Central Pacific
where: (CC) is the cyclone number (01, 02, 03,...49)
where: (YYYY) is the 4 digit year.

1.5 Tropical Cyclone Position Estimates (TCE).

1.5.1 Mission Connection. This product ensures a continuous flow of information regarding the center location of a tropical cyclone when it nears the coast and thus provides up to date location information to emergency managers and other public officials.

1.5.2 Issuance Guidelines

1.5.2.1 Creation Software. ATCF system and AWIPS for WFO Guam.

1.5.2.2 Issuance Criteria. TCEs will be issued between the 2-hourly intermediate public advisories. (Also see Section 1.1.2.3.b)

1.5.2.3 Issuance Times. NHC and CPHC will issue TCEs between 2-hourly intermediate public advisories. WFO Guam will normally issue TCEs at one hour intervals. Transmit TCEs near the beginning of the hour.

1.5.2.4 Valid Time. TCEs are valid at time of issuance until a subsequent TCE is issued or until the next scheduled or special TCP.

1.5.2.5 Product Expiration Time. Not applicable.

1.5.3 Technical Description. TCEs will follow the format and content described in this section.

1.5.3.1 UGC Type. Not applicable.

1.5.3.2. Mass News Disseminator Header. The TCE MND header block product type line is "(TROPICAL CYCLONE TYPE) (NAME) POSITION ESTIMATE."

1.5.3.3 Content. The TCE is a brief alphanumeric product containing information derived from WSR-88D radar or appropriate satellite data about tropical cyclone positions near coasts in latitude/longitude coordinates, distance, and direction from a well known point. Local weather offices will use this information in all official statements.

1.5.3.4 Format. This product is available in industry standard encoding and languages, and may include, but not limited to, ASCII, XML, WML and HTML.

```
WTaa5i cccc ddhhmm
TCExxx

(TROPICAL CYCLONE TYPE) (NAME) POSITION ESTIMATE
(ISSUING OFFICE CITY STATE)   BBCCYYYY
time am/pm time_ zone day of week mon dd yyyy

TEXT
$$
```

Figure 5. Tropical Cyclone Position Estimate
See complete example in Appendix A.
NOTE: As part of the header, a coded string will be appended at the end of the "ISSUING OFFICE CITY STATE" line. (Example: NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL BBCCYYYY)

Format:

where:	(BB) is the basin AL - North Atlantic, EP - East Pacific, CP - Central Pacific WP – western North Pacific
where:	(CC) is the cyclone number (01, 02, 03,...49)
where:	(YYYY) is the 4 digit year.

1.6. Graphical Tropical Cyclone Surface Wind Speed Probabilities

1.6.1 Mission Connection. This graphical product portrays probabilistic surface wind speed information which will help users prepare for the potential of tropical storm or hurricane conditions.

1.6.2 Issuance Guidelines.

1.6.2.1 Creation Software. N-AWIPS.

1.6.2.2 Issuance Criteria. Product will be issued for all named tropical and subtropical cyclones in the Atlantic and north Pacific basins.

1.6.2.3 Issuance Times. The static graphic will be issued at approximately 03, 09, 15, and 21 UTC and for special advisories. The animated display will be available no earlier than 15 minutes following the issuance deadlines for routine advisories (03, 09, 15, and 21 UTC) and after special advisories.

1.6.2.4 Valid Time. Product is valid at time of issuance or until the next scheduled issuance or update.

1.6.2.5 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.

1.6.3 Technical Description. Graphical product.

1.6.3.1 UGC Type. Not applicable.

1.6.3.2 Mass News Disseminator Header. Not applicable.

1.6.3.3 Content. This product shows probabilities for three wind speed thresholds: 34, 50 and 64 knots. It provides cumulative probabilities through each 12 hour interval (e.g. 0 -12 hours, 0 - 24 hours, etc.) from 0 through 120 hours. They are available in graphical forms in static and animated displays. These wind speed probabilities are based on the track, intensity, and wind structure uncertainties in the official forecasts from the tropical cyclone centers.

1.6.3.4 Format. An example of a graphic can be found on the internet at: http://www.nhc.noaa.gov/aboutnhcgraphics.shtml

1.7 Tropical Cyclone Surface Wind Speed Probabilities Text (PWS)

1.7.1 Mission Connection. This product portrays probabilistic wind speed information helping users prepare for the potential of tropical storm or hurricane conditions.

1.7.2 Issuance Guidelines.

1.7.2.1 Creation Software. ATCF system.

1.7.2.2 Issuance Criteria. Product will be issued for all named tropical and subtropical cyclones in the Atlantic, East Pacific, Central Pacific, and western North Pacific basins.

1.7.2.3 Issuance Times. These products will be issued at 03, 09, 15, and 21 UTC and with all special advisories.

1.7.2.4 Valid Time. Product is valid at time of issuance or until the next scheduled issuance or update.

1.7.2.5 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.

1.7.3 Technical Description. The text probabilities will follow the format and content described in this section.

1.7.3.1 UGC Type.

1.7.3.2 Mass News Disseminator Header. The PWS MND header product type line is: "(TROPICAL CYCLONE TYPE) (NAME) WIND SPEED PROBABILITIES NUMBER XX."

1.7.3.3 Content. The probabilities in this product are statistically based on the errors in the official track and intensity forecasts issued during the past five years by NHC and CPHC. Variability in tropical cyclone wind structure is also incorporated. New probability values are computed for each new official forecast issued by NHC or CPHC.

The first section of the product provides categorical maximum wind speed (intensity) probabilities at standard forecast hours (12, 24, 36, 48, 72, 96, and 120) for various intensity stages (dissipated, tropical depression, tropical storm and hurricane) and for the five categories on the Saffir-Simpson Hurricane Wind Scale. These probabilities apply to the maximum sustained surface wind associated with the cyclone, and not to winds that could occur at specific locations.

Probabilities for specific locations are provided in the second section for sustained wind speeds equal to or exceeding three wind speed thresholds: 34, 50 and 64 knots. Two types of probability values are provided in this table: individual period and cumulative. Individual period probabilities are provided for each of the following time intervals: 0-12 hours, 12-24 hours, 24-36 hours, 36-48 hours, 48-72 hours, 72-96 hours, and 96-120 hours. These individual period probabilities indicate the chance that the particular wind speed will *start* during each individual period at each location. Cumulative probabilities are produced for the following time periods: 0-12 hours, 0-24 hours, 0-36 hours, 0-48 hours, 0-72 hours, 0-96 hours, and 0-120 hours. These cumulative probabilities indicate the overall chance the particular wind speed will occur at each location during the period between hour 0 and the forecast hour.

1.7.3.4 Format.

```
FOaa5i cccc ddhhmm
PWSxxx

(TROPICAL CYCLONE TYPE) (NAME) WIND SPEED PROBABILITIES NUMBER X
(ISSUING OFFICE CITY STATE)  BBCCYYYY
time am/pm time_zone day of week mon dd yyyy

TEXT
$$
```

Figure 6. Text Surface Wind Speed Probabilities
See complete example in Appendix A.

NOTE: As part of the header, a coded string will be appended at the end of the "ISSUING OFFICE CITY STATE" line. (Example: NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL BBCCYYYY)

Format:
where: (BB) is the basin AL - North Atlantic, EP - East Pacific, or CP - Central Pacific
where: (CC) is the cyclone number (01, 02, 03,...49)
where: (YYYY) is the 4 digit year.

1.8 Tropical Cyclone Watch Warning Product (TCV). The TCV is based upon the Valid Time Event Code (VTEC). It summarizes all new, continued, and cancelled tropical cyclone watches and warnings issued by the NHC for the U.S. Atlantic and Gulf coasts, southern California coast, Puerto Rico, and U.S. Virgin Islands. The CPHC will issue a TCV for the main islands of the State of Hawaii.

1.8.1 Mission Connection. This product provides users with a complete listing of all tropical cyclone watches and warnings.

1.8.2 Issuance Guidelines.

1.8.2.1 Creation Software. Gempak N-AWIPS.

1.8.2.2 Issuance Criteria. The product is issued each time a U. S. tropical cyclone watch and/or warning is issued, continued, or discontinued for all Atlantic, portions of the North East Pacific, and the North Central Pacific Ocean basin tropical cyclones.

1.8.2.3 Issuance Times. These products will be issued with all routine, intermediate, and special advisories if United States watches or warnings are continued, posted, changed or canceled.

1.8.2.4 Valid Time. Product is valid at time of issuance or until the next scheduled issuance or update.

1.8.2.5 Product Expiration Time. Not more than 6 hours, or when superseded by the next update (generally 2 or 3 hours later.)

1.8.3 Technical Description. This text product will follow the format and content described in this section.

1.8.3.1 UGC Type. TCVs will use the segmented zone (Z) form of the UGC.

1.8.3.2 Mass News Disseminator Header. The TCV MND header product type line is: "(NAME) WATCH/WARNING BREAKPOINTS/ ADVISORY NUMBER XX."

1.8.3.3 Content. The VTEC product will use three action codes:

-**NEW** is used when a watch or warning is first issued for a given geographic area. The geographic areas include the Atlantic and Gulf Coasts of the continental U.S., Puerto Rico, the U.S. Virgin Islands, southern California coast, and the main islands of the State of Hawaii. NEW is also used for upgrades and downgrades (e.g. Tropical Storm Watch to Tropical Storm Warning, Hurricane Warning to Tropical Storm Warning, Tropical Storm Warning to Hurricane Watch, etc.)

-**CON** is used if there are no changes in the watch/warning for a given geographic area
-**CAN** is used to cancel an area if there is no longer a watch/warning in effect for the geographic area or if the watch/warning is upgraded/downgraded. (e.g. an area once under a Tropical Storm Warning is now under a Hurricane Warning: the VTEC will show the area as CAN for the Tropical Storm Warning and NEW for the Hurricane Warning)

The product will use official hurricane "break points" and their latitude and longitude as defined in National Weather Service Instruction (NWSI) 10-605, Tropical Cyclone Official Defining Points and Geographic Defining Points. In rare instances, other supplemental "break points", with their latitude and longitude, could be used.

The VTEC event tracking number (ETN) will take the form of XNNN where X is the basin:
1 - Atlantic/Gulf of Mexico
2 - East Pacific
3 – Central Pacific
4 – western North Pacific (future)
NNN corresponds to the tropical cyclone identifier number. In tropical cyclone products, the tropical cyclone identifier number is found at the end of the product type line in the MND header. Not all identifier numbers will appear in a TCV since a TCV is issued only those for storms for which watches and/or warnings are issued. Thus the TCV ETNs may not be sequential.

1.8.3.4 Format.

```
WTNT8i KNHC ddhhmm
TCVxxx

(NAME) WATCH/WARNING BREAKPOINTS/ADVISORY NUMBER X
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL  BBCCYYYY
time am/pm time_zone day of week mon dd yyyy

.HURRICANE (NAME)

STZxxx-xxx-xxx-...-DDHHMM-
/O.AAA.KNHC.PP.S.####.YYMMDDTHHNNZb-000000T0000Z/
TIME AM/PM TIME_ZONE DAY MMM DD YYYY

BREAKPOINT START                    XX.DDN {lat} YY.DD(W/E) {lon}
BREAKPOINT END                      XX.DDN {lat} YY.DD(W/E) {lon}

$$

STZxxx-xxx-...-DDHHMM
/O.AAA.KNHC.PP.S.####.YYMMDDTHHNNZb-000000T0000Z/
TIME AM/PM TIME_ZONE DAY MMM DD YYY

BREAKPOINT START {etc}

$$
```

Figure 7. Tropical Cyclone Watch Warning Product
See complete example in Appendix A. For VTEC details, see http://www.weather.gov/os/vtec.

NOTE: As part of the header, a coded string will be appended at the end of the "ISSUING OFFICE CITY STATE" line. (Example: NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL BBCCYYYY)

Format:
where: (BB) is the basin AL - North Atlantic, EP - East Pacific, or CP - Central Pacific
where: (CC) is the cyclone number (01, 02, 03,...49)
where: (YYYY) is the 4 digit year.

1.9 Aviation Tropical Cyclone Advisory (TCA).

1.9.1 Mission Connection. The TCA is intended to provide short-term tropical cyclone forecast guidance for international aviation safety and routing purposes.

1.9.2 Issuance Guidelines.

1.9.2.1 Creation Software. ATCF

1.9.2.2 Issuance Criteria. Prepared by NHC and CPHC for all on-going tropical and subtropical cyclone activity in their respective areas of responsibility. This requirement is stated in the World Meteorological Organization Region IV and V hurricane plan.

1.9.2.3 Issuance Times. 0300, 0900, 1500, and 2100 UTC, and with all special advisories.

1.9.2.4 Valid Times. TCAs are valid from the time of issuance until the next scheduled issuance or update.

1.9.2.5 Product Expiration Time. Generally 6 hours after the issuance time and should coincide with the next expected update.

1.9.3 Technical Description. TCAs will follow the format and content described in this section.

1.9.3.1 UGC Type. Not applicable.

1.9.3.2 Mass News Disseminator Header. The TCA header block product type line is "(TROPICAL CYCLONE TYPE) ICAO ADVISORY #."

1.9.3.3 Content. TCAs list the current TC position, motion and intensity, and 6-, 12-, 18- and 24-hour forecast positions and intensities. It is an alphanumeric text product produced by hurricane forecasters, and consists of information extracted and interpolated from the official forecasts. This forecast is produced from subjective evaluation of current meteorological and oceanographic data as well as output from numerical weather prediction models, and is coordinated with affected WFOs, the National Centers, and the Department of Defense.

1.9.3.4 Format.

```
FKaa2i cccc ddhhmm
TCAxxx

(TROPICAL CYCLONE TYPE) (NAME)ICAO ADVISORY NUMBER ##
(ISSUING OFFICE CITY STATE ) BBCCYYYY
time UTC day of week mon dd yyyy

TC ADVISORY
DTG:
TCAC:
TC:
NR:
PSN:
MOV:
C:
MAX WIND:
FCST PSN + 06 HR:
FCST MAX WIND + 06 HR:
FCST PSN + 12 HR:
FCST MAX WIND + 12 HR:
FCST PSN + 18 HR:
FCST MAX WIND + 18 HR:
FCST PSN + 24 HR:
FCST MAX WIND + 24 HR:
RMK

NXT MSG:

$$
```

Figure 8. Aviation Tropical Cyclone Advisory Format

NOTE: As part of the header, a coded string will be appended at the end of the "ISSUING OFFICE CITY STATE" line. (Example: NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL BBCCYYYY)

Format:
where: (BB) is the basin AL - North Atlantic, EP - East Pacific, or CP - Central Pacific
where: (CC) is the cyclone number (01, 02, 03,...49)
where: (YYYY) is the 4 digit year.

1.10 Tropical Cyclone Track and Watch/Warning Graphic.

1.10.1 Mission Connection. This product is a graphical representation of text products (TCP and TCM) issued by NHC, CPHC, and WFO Guam. It provides critical information on the forecast path of the tropical cyclone and watches/warnings.

1.10.2 Issuance Guidelines.

1.10.2.1 Creation Software. N-AWIPS. PC for WFO Guam.

1.10.2.2 Issuance Criteria. Created when routine, intermediate and special TCPs are issued.

1.10.2.3 Issuance Times. The product is available on the internet at approximately 0300, 0900, 1500, and 2100 UTC for the routine advisories. The graphic is also produced for intermediate and special advisories.

1.10.2.4 Valid Times. Valid from the time of issuance until the next routine issuance or by an intermediate or special advisory.

1.10.2.5 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.

1.10.3 Technical Description. The graphic will follow the format and content described in this section.

1.10.3.1 UGC Type. Not applicable.

1.10.3.2 Mass News Disseminator Header. Not applicable. Internet product.

1.10.3.3 Content. The Tropical Cyclone Track and Watch/Warning graphic contains the storm's forecast track, a cone along the track based upon the average area of uncertainty, and watches/warnings. The cone (solid white and hatched area) represents the probable track of the center of a tropical cyclone, and is formed by enclosing the area swept out by a set of circles along the forecast track (at 12, 24, 36 hours, etc). The size of each circle is set so that two-thirds of historical official forecast errors over a 5-year sample fall within the circle. This product is also issued for subtropical cyclones.

The coastal watches and warnings display shows an approximate representation of coastal areas under a hurricane warning (red), hurricane watch (pink), tropical storm warning (blue) and tropical storm watch (yellow). The orange circle indicates the current position of the center of the tropical cyclone. A second version of this graphic includes a black line and dots to depict the NHC/CPHC forecast track of the center at the times indicated.

1.10.3.4 Format. Examples of the graphic can be found on the internet at: http://www.nhc.noaa.gov/aboutnhcgraphics.shtml

1.11 Cumulative Wind Distribution

1.11.1 Mission Connection. This NHC product is a graphical representation of the past track and size of the storm. This information can be used to provide areas impacted by the past track of the storm.

1.11.2 Issuance Guidelines.

1.11.2.1 Creation Software. N-AWIPS

1.11.2.2 Issuance Criteria. Created when routine TCPs and TCMs are issued and for special advisories.

1.11.2.3 Issuance Times. The product is available on the Internet at 0300, 0900, 1500, and 2100 UTC. The graphic is also produced for special advisories.

1.12.2.4 Valid Times. Valid from the time of issuance until the next routine issuance or by a special advisory.

1.11.2.5 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.

1.11.3 Technical Description. The graphic will follow the format and content described in this section.

1.11.3.1 UGC Type. Not applicable.

1.11.3.2 Mass News Disseminator Header. An example of a graphic can be found on the internet at: http://www.nhc.noaa.gov/aboutnhcgraphics.shtml

1.11.3.3 Content. This graphic shows how the size of the storm has changed, and the areas potentially affected so far by sustained winds of tropical storm force (in orange) and hurricane force (in red). The display is based on the wind radii contained in the set of Forecast/Advisories indicated at the top of the figure. Users are reminded the Forecast/Advisory wind radii represent the maximum possible extent of a given wind speed within particular quadrants around the tropical cyclone. As a result, not all locations falling within the orange or red swaths will have experienced sustained tropical storm- or hurricane-force winds, respectively.

1.12 Tropical Cyclone Surface Wind Field Graphic

1.12.1 Mission Connection. These NHC and CPHC graphics supplement text products by illustrating the area potentially affected by the tropical cyclone's sustained tropical storm and hurricane force winds at the initial advisory time. In addition to the wind field, the graphic provides an approximate representation of coastal areas under tropical storm/hurricane watches/warnings.

1.12.2 Issuance Guidelines.

1.12.2.1 Creation Software. N-AWIPS

1.12.2.2. Issuance Criteria. Created for each tropical cyclone in the Atlantic, Eastern Pacific, and Central Pacific basins.

1.12.2.3 Issuance Times. The product is available on the internet at 0300, 0900, 1500, and 2100 UTC. The graphic is also produced for special advisories.

1.12.2.4 Valid Times. Valid from the time of issuance until the next routine issuance or by a special advisory.

1.12.2.5 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.

1.12.3.1 UGC Type. Not applicable.

1.12.3.2 Mass News Disseminator Header. Not applicable. Internet product.

1.12.3.3 Content. Tropical storm-force winds are shown in orange and hurricane-force winds are shown in red. The display is based on the wind radii contained in the latest Forecast/Advisory (indicated at the top of the figure). Users are reminded that the Forecast/Advisory wind radii represent the maximum possible extent of a given wind speed within particular quadrants around the tropical cyclone. As a result, not all locations falling within the orange or red shaded areas will be experiencing sustained tropical storm- or hurricane-force winds, respectively. In addition to the wind field, this graphic shows an approximate representation of coastal areas under a hurricane warning (red), hurricane watch (pink), tropical storm warning (blue) and tropical storm watch (yellow). The white dot indicates the current position of the center of the tropical cyclone, and the dashed black line shows the history of the center of the tropical cyclone.

1.12.3.4 Format. An example of the product can be found on the internet at:

http://www.nhc.noaa.gov/aboutnhcgraphics.shtml

1.13 Maximum Wind Speed Probability Table

1.13.1 Mission Connection. This NHC product provides probabilistic information for decision makers such as emergency managers.

1.13.2 Issuance Guidelines.

1.13.2.1 Creation Software. N-AWIPS

1.13.2.2 Issuance Criteria. Created when routine TCPs and TCMs are issued and for special advisories.

1.13.2.3 Issuance Times. The product is available on the internet at 0300, 0900, 1500, and 2100 UTC. The graphic is also produced for special advisories.

1.13.2.4 Valid Times. Valid from the time of issuance until the next routine issuance or by a special advisory.

1.13.2.5 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.

1.13.3 Technical Description. The table will follow the format and content described in this section.

1.13.3.1 UGC Type. Not applicable.

1.13.3.2 Mass News Disseminator Header. Not applicable. Internet product.

1.13.3.3 Content. This product provides probabilities, in percent, for the maximum sustained (1-minute average) surface (10 meter elevation) wind speed of a tropical cyclone for various intensity categories. The NHC issues this product for tropical cyclones in the Atlantic and Eastern Pacific basins and for subtropical storms.

The probabilities in this product are statistically based on the errors in the official track and intensity forecasts issued during the past five years by NHC. The product provides maximum wind speed (intensity) probabilities at standard forecast hours (12, 24, 36, 48, 72, 96, and 120) for various stages of a tropical cyclone (dissipated, depression, tropical storm and hurricane) and for the five categories of the Saffir-Simpson Hurricane Wind Scale. The table also includes the official deterministic maximum wind speed (intensity) forecast in miles per hour (mph) for reference.

1.13.3.4 Format. An example of the table can be found on the internet at: http://www.nhc.noaa.gov/aboutnhcgraphics.shtml

1.14 Tropical Cyclone Storm Surge Probability Products

1.14.1 Mission Connection. This series of NHC products provides probabilistic information for decision makers such as emergency mangers.

1.14.2 Issuance Guidelines.

1.14.2.1 Creation Software. N-AWIPS

1.14.2.2 Issuance Criteria. Created when a hurricane watch or hurricane warning is in effect for any portion of the Gulf or Atlantic coasts of the continental United States.

1.14.2.3 Issuance Times. The products are available on the internet approximately one hour after the issuance of routine NHC tropical cyclone advisories which are issued at 0300, 0900, 1500, and 2100 UTC.

1.14.2.4 Valid Times. Valid from the time of issuance until the next routine issuance.

1.14.2.5 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.

1.14.3 Technical Description. The storm surge graphic is based upon an ensemble of Sea, Lake, and Overland Surge from Hurricanes (SLOSH) model runs using the NHC official

advisory and accounts for track, size, and intensity errors based on historical errors. The product is a statistical combination of an ensemble of SLOSH model runs. All ensemble members are based on the current NHC's tropical cyclone advisory. They take into account historical error characteristics by varying input parameters such as forward speed, cross track location, radius of maximum wind, and hurricane intensity. Cumulative probabilities, from 2 through 25 feet above normal tide levels at a given location during the hurricane, at intervals of one foot, will be provided. Products are generated in .kmz format and displayed in a Google map interface. They are also generated as a shape file.

1.14.3.1 UGC Type. Not applicable.

1.14.3.2 Mass News Disseminator Header. Not applicable. Internet product.

1.14.3.3 Content. The storm surge products consist of graphics and GRIB2 files for creating the graphics for the Gulf of Mexico and the Eastern Atlantic coastal areas. The graphics show the probabilities, in percent, of storm surge equaling or exceeding 2 through 25 feet, at intervals of one foot.

1.14.3.4 Format. An example of the graphics can be found on the internet at: http://www.nhc.noaa.gov/aboutnhcgraphics.shtml

2. Subtropical Cyclone Forecast and Advisory Products

2.1 Subtropical Cyclone Public Advisories (TCP). NHC will issue subtropical cyclone advisories. However, due to the lack of well-defined criteria for distinguishing subtropical from non-tropical lows, marginally-subtropical systems may be handled as non-tropical gale or storm centers in High Seas forecast products. Format and content of these products are similar to the public tropical cyclone advisory. (See appendix A for an example). Title the advisories "SUBTROPICAL DEPRESSION (NUMBER)" and in the message body refer to the depression as "SUBTROPICAL DEPRESSION (NUMBER)." If winds reach subtropical storm strength, the storm receives the next available name. Title the advisories "SUBTROPICAL STORM (NAME)" and in the body message refer to the storm as "SUBTROPICAL STORM (NAME)." Issue these advisories at the same scheduled times as public tropical cyclone advisories.

2.2 Subtropical Cyclone Forecast/Advisory (TCM). Issue these advisories for all subtropical cyclones for which a TCP has been issued. Write the advisory in the same format and content as the tropical cyclone forecast/advisories. Title the advisories "SUBTROPICAL DEPRESSION NUMBER" and in the message body refer to the depression as "SUBTROPICAL DEPRESSION NUMBER." If winds reach subtropical storm strength, the storm receives the next available name. Title the advisories "SUBTROPICAL STORM (NAME)" and in the body message body refer to the storm as "SUBTROPICAL STORM (NAME)." Issue these at the same times as scheduled tropical cyclone forecast/advisories.

3. Special Advisories. Special advisories are issued whenever an unexpected significant change has occurred or when watches or warnings are to be issued between regularly scheduled advisories. (Watches or warnings may be discontinued on intermediate public advisories.)

When a special advisory is required, the entire advisory package will be issued, including a public advisory, a forecast/advisory, a tropical cyclone discussion, probabilistic winds products, and an ICAO/WMO tropical cyclone advisory. The Mass News Disseminator Header block is (Tropical Cyclone Type) (Name) Special (Product Type (e.g., Discussion, Forecast Advisory, Wind Speed Probabilities, or Aviation Advisory)) Number xx. For example, Tropical Storm Gustav Special Forecast/Advisory Number 14.

When the special advisory is issued only for a watch or warning, it will contain the track and intensity forecast from the previous regularly scheduled advisory with only the initial position and intensity updated. When the special advisory is issued for an unexpected change, the previous track and intensity forecast will be updated to reflect the unexpected change.

4. Numbering and Naming Tropical and Subtropical Cyclones.

4.1 Numbering and Naming Tropical Cyclones. NHC and CPHC will number tropical depressions in their areas of responsibility. Depression numbers are always spelled out (e.g. "ONE", "TWO", "THREE", etc.). Depression numbers are assigned to match the seasonal cyclone number, even if a previous cyclone has bypassed the depression stage. For example, if the first tropical cyclone of the season forms directly as a storm (e.g., a fast-moving tropical wave becomes a tropical storm without ever becoming a depression), then the depression number "ONE" would simple be skipped and not used until the following year. In the North Pacific, for ease in differentiation, tropical depression numbers, assigned by NHC or CPHC, will include the suffix "E" for eastern (east of 140°W) or "C," for central (180° to 140°W), respectively, after the number. In the Atlantic, eastern and central Pacific, once the depression reaches tropical storm intensity, NHC and CPHC will name it and drop the depression number. The depression number will not be used again until the following year. Give tropical cyclones a name in the first advisory after intensifying to 34 knots (39 mph) or greater. In the western North Pacific, once the depression is named by Regional Specialized Meteorological Center (RSMC) Tokyo, use the RSMC name followed by the Joint Typhoon Warning Center (JTWC) number in parentheses. If the JTWC upgrades the depression to tropical storm before the RSMC names it, the term Tropical Storm xxW will be used, where xxW is the JTWC tropical cyclone number.

The following rules apply for tropical cyclones passing from one basin to another: Retain the name if a tropical cyclone passes from one basin into another basin as a tropical cyclone, i.e. advisories are continuous. An unnamed tropical depression will also retain its number (e.g. Tropical Depression Six-E remains Tropical Depression Six-E) if it crosses into another area of responsibility. For unnamed tropical depressions moving from west to east across 180°, CPHC will use the associated JTWC number, and indicate JTWC in parentheses following the number. For named systems, CPHC will use the associated RSMC Tokyo name and provide the associated JTWC number in parentheses.

Within a basin, if the remnant of a tropical cyclone redevelops into a tropical cyclone, it is assigned its original number or name. If the remnants of a former tropical cyclone regenerate in a new basin, the regenerated tropical cyclone will be given a new designation.

If NHC uses all of the names for a given year and another storm requires a name, the Greek alphabet will be used (Alpha, Beta, etc.)

4.2 Numbering and Naming Subtropical Storms. A single list of numbers and names will be used for all tropical and subtropical cyclones. Therefore, numbering of subtropical depressions will follow the same procedure as tropical depressions. For example, if the first subtropical depression follows the first tropical depression, the subtropical depression will be given the designation SUBTROPICAL DEPRESSION TWO. If a subtropical depression becomes a subtropical storm, it receives the next available name in the tropical cyclone naming sequence.

5. Numbering Advisories and Tropical/Subtropical Cyclone Discussions. Number tropical and subtropical cyclone advisories and discussions in the Atlantic and the Pacific similarly. Number scheduled and special advisories and TCDs consecutively beginning with the number 1 (not spelled out) for each new tropical or subtropical cyclone, and continue through the duration of the cyclone. In both the Atlantic and the Pacific, intermediate advisories and TCDs will retain the advisory number of the scheduled or special advisory they update and append an alphabetic designator (i.e., "HURRICANE ALLISON INTERMEDIATE ADVISORY NUMBER 20A").

6. Other Tropical Cyclone Centers and NCEP Products.

6.1 Satellite Interpretation Message (SIM).

6.1.1 Mission Connection. The SIM locates hazardous weather areas over land and sea, to locate obscured higher terrain, to describe general meteorological conditions, and to make plans for outdoor events, and other activities.

6.1.2 Issuance Guidelines.

6.1.2.1 Creation Software. AWIPS.

6.1.2.2 Issuance Criteria. Issued by WFO Honolulu four times a day for the Hawaiian Islands, with updates as required. Issued by WFO Guam twice daily.

6.1.2.3 Issuance Times. For Hawaii: 0030, 0530, 1230, and 1830 UTC. For WFO Guam: 0300 and 1500 UTC

6.1.2.4 Valid Time. SIMs are valid from the time of issuance until the next scheduled issuance or update.

6.1.2.5 Product Expiration Time. Generally should coincide with the next expected update.

6.1.3 Technical Description. SIMs will follow the format and content described in this section.

6.1.3.1 UGC Type. Not applicable.

6.1.3.2. Mass News Disseminator Header. The SIM MND header block product type line is "HAWAIIAN ISLANDS SATELLITE INTERPRETATION MESSAGE" or "SATELLITE INTERPRETATION MESSAGE."

6.1.3.3 Content. The SIM is an alphanumeric product providing an interpretation of synoptic weather features, significant weather areas, and various cloud and weather phenomena based upon satellite imagery (visual, infrared, water vapor, etc.). WFO Honolulu prepares the SIM for a portion of their AOR. The AORs for WFO Honolulu vary and depend upon the program (tropical cyclone, aviation, marine, public, and satellite). For the SIM program, WFO Honolulu's AOR is from 140°W to 180° and between 10°N and 30°N. WFO Guam's AOR is from 130°E to 180° between the equator and 25°N. WFOs Honolulu and Guam can include a description of more distant features if these features relate to significant weather affecting or will soon affect their AOR. WFOs Honolulu and Guam each determine the criteria for significant cloud features based on user inputs.

6.1.3.4 Format.

```
ATHW40 PFHO ddhhmm
SIMHI

HAWAIIAN ISLANDS SATELLITE INTERPRETATION MESSAGE
CENTRAL PACIFIC HURRICANE CENTER/WEATHER FORECAST OFFICE
HONOLULU HI
time am/pm time_zone day of week mon dd yyyy

TEXT

$$
```

```
ATPQ40  PGUM ddhhmm
SIMGUM

SATELLITE INTERPRETATION MESSAGE
NATIONAL WEATHER SERVICE TIYAN GU
time am/pm time_zone day of week mon dd yyyy

WESTERN NORTH PACIFIC BETWEEN THE EQUATOR AND 25N FROM 130E TO 180

TEXT

$$
```

Figure 9. Satellite Interpretation Message Format

6.2 Tropical Weather Discussion (TWD). TPC's TAFB will issue these discussions to describe major synoptic weather features and significant areas of disturbed weather in the tropics.

6.2.1 Mission Connection. This product is intended to provide current weather information for those who need to know the current state of the atmosphere and expected trends to assist them in their decision making. The product provides significant weather features, areas of disturbed weather, expected trends, the meteorological reasoning behind the forecast, model performance, and in some cases a degree of confidence.

6.2.2 Issuance Guidelines.

6.2.2.1 Creation Software. AWIPS.

6.2.2.2 Issuance Criteria. The product is issued routinely and updated if necessary, when significant changes occur, e.g., a tropical cyclone's intensity category is upgraded or downgraded.

6.2.2.3 Issuance Times. One TAFB discussion will cover the Gulf of Mexico, the Caribbean, and the Atlantic between the equator and 32°N latitude and be transmitted at 0005, 0605, 1205, and 1805 UTC. A second TAFB message for the eastern Pacific between the equator and 32°N and east of 140°W will be transmitted at 0405, 1005, 1605, and 2205 UTC.

6.2.2.4 Valid Time. TWDs are valid from the time of issuance until the next scheduled issuance or update.

6.2.2.5 Product Expiration Time. Generally 6 hours after the issuance time and should coincide with the next expected update.

6.2.3 Technical Description. TWDs will follow the format and content described in this section.

6.2.3.1 UGC Type. Not applicable.

6.2.3.2. Mass News Disseminator Header. The TWD MND header block product type line is "TROPICAL WEATHER DISCUSSION."

6.2.3.3 Content. The TWD product is an alphanumeric format and contains sections on Tropical Cyclones/Tropical Waves/Disturbances, the location of the Intertropical Convergence Zone and associated convection along it, surface/middle/upper level synoptic discussion, and significant clouds/convection. The product is written in a plain language format but will contain meteorological terms such as trough, ridge, subsidence, jet stream, etc.

6.2.3.4 Format. This product is available in industry standard encoding and languages, and may include, but not limited to, ASCII, XML, WML and HTML.

```
Ataaii cccc ddhhmm
TWDxx

TROPICAL WEATHER DISCUSSION
ISSUING OFFICE CITY STATE
time am/pm time_zone day of week mon dd yyyy

TEXT

$$
FORECASTER NAME
```

Figure 10. Tropical Weather Discussion Format
See complete example in Appendix A.

6.3 Tropical Weather Outlook (TWO). NHC and CPHC will prepare the TWO during their respective tropical cyclone seasons.

6.3.1 Mission Connection. The TWO provides users with a general assessment of activity in the tropics, pertaining to tropical cyclone formation by providing to users possible areas where tropical cyclones could develop.

6.3.2 Issuance Guidelines.

6.3.2.1 Creation Software. ATCF.

6.3.2.2 Issuance Criteria. Routinely during the tropical cyclone season. A Special Tropical Weather Outlook is issued when important changes in areas of disturbed weather over tropical or subtropical waters need to be conveyed before the next scheduled release of the TWO.

6.3.2.3 Issuance Times. In the Atlantic, Eastern Pacific, and Central Pacific, transmission times are 0000, 0600, 1200, and 1800 UTC.

6.3.2.4 Valid Time. TWOs are valid from the time of issuance until the next scheduled issuance.

6.3.2.5 Product Expiration Time. Generally 6 hours after the issuance time and should coincide with the next expected update.

6.3.3 Technical Description. TWOs will follow the format and content described in this section.

6.3.3.1 UGC Type. Not applicable.

6.3.3.2 Mass News Disseminator Header. The TWO MND header block product type line is "TROPICAL WEATHER OUTLOOK" or "SPECIAL TROPICAL WEATHER OUTLOOK."

6.3.3.3 Content. The outlook covers tropical and subtropical waters and discusses areas of disturbed weather and the potential for tropical cyclone development during the next 48 hours. The outlook will mention tropical and subtropical cyclones, including the system's location (in either general terms or map coordinates), status, and change in status. For the first 24 hours of a tropical cyclone, the outlook will include a statement identifying the NWS product header and WMO headers for the advisory (see Appendix B).

For the Atlantic and Eastern Pacific hurricane basins, a graphical version of the product is also provided on the NHC web page. For the Central Pacific hurricane basin, a graphical version of the product is provided on the CPHC web page.

For the Atlantic, Eastern Pacific, and Central Pacific hurricane basins, the product will include a probability genesis forecast, to the nearest 10 percent, for the probability of tropical cyclone formation within the next 48 hours.

6.3.3.4 Format. This product is available in industry standard encoding and languages, and may include, but not limited to, ASCII, XML, WML and HTML.

```
Ataaii cccc ddhhmm
TWOxxx

TROPICAL WEATHER OUTLOOK
ISSUING OFFICE CITY STATE
time am/pm time_ zone day of week mon dd yyyy

TEXT

$$
```

Figure 11. Tropical Weather Outlook Message Format
See complete example in Appendix A.

6.4 Tropical Cyclone Summary - Fixes (TCS).

6.4.1 Mission Connection. This provides meteorological information to marine interests, military forecasters and national meteorological services of countries/members in the Pacific Ocean area by CPHC.

6.4.2 Issuance Guidelines.

6.4.2.1 Creation Software. N-AWIPS.

6.4.2.2 Issuance Criteria. When a tropical cyclone is classifiable using the Dvorak technique.

6.4.2.3 Issuance Times. After the initial tropical cyclone fix, succeeding products will be done at approximately 0000, 0600, 1200, and 1800 UTC as long as the system is classifiable.

6.4.2.4 Valid Time. TCSs are valid from the time of issuance until the next scheduled issuance or update.

6.4.2.5 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.

6.4.3 Technical Description. TCSs will follow the format and content described in this section.

6.4.3.1 UGC Type. Not applicable.

6.4.3.2 Mass News Disseminator Header. The TCS header block product type line is "CENTRAL PACIFIC TROPICAL CYCLONE SUMMARY - FIXES" or "SOUTH PACIFIC TROPICAL CYCLONE SUMMARY - FIXES."

6.4.3.3 Content. TCS is an alphanumeric product provided by CPHC when there is classifiable (using the Dvorak technique) tropical cyclone activity in the central north or south Pacific. The TCS is a satellite-based estimate of tropical cyclone location, movement, and intensity with a brief remarks section. CPHC prepares TCS for a portion of their AOR. The AORs for CPHC/Weather Forecast Office (WFO) Honolulu (CPHC is collocated with the Weather Forecast Office Honolulu) varies depending upon the program (tropical cyclone, aviation, marine, public, and satellite). For TCS program, CPHC's AOR is the area north of the equator between 140°W – 160°E and from the equator to 25°S between 120°W to 160°E.

6.4.3.4 Format.

```
TXPaii cccc ddhhmm
TCSxxx

CENTRAL PACIFIC TROPICAL CYCLONE SUMMARY - FIXES or
SOUTH PACIFIC TROPICAL CYCLONE SUMMARY - FIXES
NWS CENTRAL PACIFIC HURRICANE CENTER HONOLULU HI
time am/pm time_zone day of week mon dd yyyy

TEXT

$$
```

Figure 12. Tropical Cyclone Summary - Fixes Format

6.5 Tropical Cyclone Danger Area Graphic

6.5.1 Mission Connection. The product is used to assist mariners and military agencies in avoiding high seas associated with tropical cyclones. Also, it provides guidance to users on possible tropical cyclone genesis.

6.5.2 Issuance Guidelines

6.5.2.1 Creation Software. N-AWIPS.

6.5.2.2 Issuance Criteria. Routinely prepared by NHC/TAFB and CPHC during the tropical cyclone season for all on-going tropical cyclone activity in their respective areas of responsibility.

6.5.2.3 Issuance Times. The product is disseminated four times per day during the hurricane season within one hour after the advisory package issuance. This would be at 0400, 1000, 1600 and 2200 UTC.

6.5.2.4 Valid Time. Tropical Cyclone Danger Area graphic is valid from the time of issuance until the next scheduled issuance or update.

6.5.2.5 Product Expiration Time. Generally 6 hours after the issuance time and should coincide with the next expected update.

6.5.3 Technical Description. The Tropical Cyclone Danger Area graphic will follow the format and content described in this section.

6.5.3.1 UGC Type. Not applicable.

6.5.3.2 Mass News Disseminator Header. Not applicable.

6.5.3.3 Content. The Tropical Cyclone Danger Area is a NHC/TAFB graphical marine product depicting a tropical cyclone's track (out to 72 hours) and shades in a danger area determined by adding 100, 200, and 300 nautical miles plus the 34-knot wind radii to the 24-, 48-, and 72- hour forecast position respectively in the Atlantic and east Pacific. In addition, areas of possible tropical cyclone genesis with a 30 percent or greater chance of formation out to 48 hours are included. The area of possible formation is depicted on the graphic as a circular, rectangle, oval, or polygon shaped area. The product is prepared by the NHC/TAFB and covers the entire Atlantic north of the equator and the Pacific north of the equator from the Mexican and Central American coasts west to 140°W. CPHC prepares a separate chart for 140°W to 180° and north of the equator.

6.5.3.4 Format. An example of a graphic can be found on the internet at: http://www.nhc.noaa.gov/abouttafbprod.shtml

6.6 HPC Public Advisories (TCP)

6.6.1 Mission Connection. Provides users with meteorological information, primarily the potential of heavy rain and flash flooding, from decaying subtropical or tropical systems which have moved inland.

6.6.2 Issuance Guidelines.

6.6.2.1 Creation Software. Word Processor

6.6.2.2 Issuance Criteria. The HPC will issue public advisories after NHC discontinues its advisories on subtropical and tropical cyclones that have moved inland in the conterminous United States or Mexico, but still pose a threat of heavy rain and flash floods in the conterminous United States or Mexico. The last NHC advisory will normally be issued when winds in an inland tropical cyclone drop below tropical storm strength, and the tropical depression is not forecast to regain tropical storm intensity or re-emerge over water. Therefore HPC will only handle tropical depressions or remnants. HPC advisories will terminate when the threat of flash flooding has ended.

6.6.2.3 Issuance Times. Advisories are issued at 0300, 0900, 1500, and 2100 UTC.

6.6.2.4 Valid Times. TCPs are valid from the time of issuance until the next scheduled issuance or update.

6.6.2.5 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.

6.6.3 Technical Description. TCPs will follow the format and content described in this section.

6.6.3.1 UGC Type. Not applicable.

6.6.3.2 Mass News Disseminator Header. The TCP MND header block product type line is "PUBLIC ADVISORY NUMBER XX FOR (TROPICAL CYCLONE TYPE) (NAME)."

6.6.3.3 Content. The TCP is an alphanumeric product. TCP products, issued by HPC, will continue to be numbered in sequence with tropical cyclone advisories issued by TPC and will reference the former storm's name in the text. If the system is a tropical depression HPC should refer to it as "Tropical Depression XX." If the system is no longer a tropical cyclone then HPC will refer to it as "remnants of XX." Content will refer to the decaying system's position, intensity, general forecast trends, highlight impacts which occurred and are expected to occur (usually in relation to heavy rain/flooding and tornadoes), and indicate when the next summary will be issued. A table at the end of the message will provide forecast latitude and longitude of the remnant low.

6.6.3.4 Format. This product is available in industry standard encoding and languages, and may include, but not limited to, ASCII, XML, WML and HTML.

```
WTNT3i KWNH Ddhhmm
TCPATc

PUBLIC ADVISORY NUMBER XX FOR (TROPICAL CYCLONE TYPE) (NAME)
NWS HYDROMETEOROLOGICAL PREDICTION CENTER CAMP SPRINGS MD BBCCYYYY
time am/pm time_ zone day of week mon dd yyyy

TEXT

SZATANEK/BANN

FORECAST POSITIONS

INITIAL     25/2100Z 29.0N  77.4W
12HR VT     26/0600Z 33.1N  72.6W
24HR VT     26/1800Z 39.4N  65.2W
36HR VT     27/0600Z 43.1N  58.2W
48HR VT     27/1800Z...DISSIPATED

$$
```

Figure 13. HPC Public Advisory Product Format
See complete example in Appendix A.

NOTE: As part of the header, a coded string will be appended at the end of the "ISSUING OFFICE CITY STATE" line. (Example: NWS HYDROMETEOROLOGICAL PREDICTION CENTER CAMP SPRINGS MD BBCCYYYY)

Format:
where: (BB) is the basin AL - North Atlantic, EP - East Pacific, or CP - Central Pacific
where: (CC) is the cyclone number (01, 02, 03,...49)
where: (YYYY) is the 4 digit year.

6.7 Tropical Weather Summary (TWS)

6.7.1 Mission Connection. These products are used by a variety of users for historical purpose, business (e.g. insurance) and climatological needs.

6.7.2 Issuance Guidelines.

6.7.2.1 Creation Software. ATCF.

6.7.2.2 Issuance Criteria. Monthly.

6.7.2.3 Issuance Times. Summaries are issued on the first day of each month from June through December for the Eastern Pacific and from July through December for the Atlantic and Central Pacific hurricane basins. The last TWS of the tropical cyclone season (December issuance) covers activity during the entire season from June through the end of November.

6.7.2.4 Valid Time. Not applicable.

6.7.2.5 Product Expiration Time. Not applicable.

6.7.3 Technical Description. TWSs will follow the format and content described in this section.

6.7.3.1 UGC Type. Not applicable.

6.7.3.2 Mass News Disseminator Header. The TWS MND header block product type line is "TROPICAL WEATHER SUMMARY."

6.7.3.3 Content. The TWS is a monthly alphanumeric product which the NHC and CPHC issue to summarize tropical cyclone activity during the previous month. NHC issues summaries which cover tropical cyclone activity over the Atlantic and eastern North Pacific (north of the equator and east of 140°W) basins. CPHC issues summaries which cover tropical cyclone activity over the central North Pacific (north of the equator between 140°W and 180°). The product provides a table of basic meteorological statistics, such as the dates of occurrence and estimated peak intensity, for all of the season's tropical cyclones to date. It may contain brief descriptions for records of interest. Monthly updates permit a timely release of tropical cyclone information. In addition to the TWS, NHC and CPHC prepare and submit formal, detailed end-of-season tropical cyclone reports which involves a lengthy review and publication process, providing comprehensive information on each tropical cyclone, including synoptic history, meteorological statistics, casualties and damages, and the post-analysis best track six-hourly positions and intensities.

6.7.3.4 Format.

```
Ataaii cccc ddhhmm
TWSxx

TROPICAL WEATHER SUMMARY
ISSUING OFFICE CITY STATE
time am/pm time_zone day of week mon dd yyyy

TEXT

$$
```

Figure 14. Tropical Weather Summary Format

6.8 Tropical Cyclone Reports (TCR).

6.8.1 Mission Connection. The TCR is the official record of each tropical cyclone within NHC's and CPHC's respective areas of responsibility and documents each storm's intensity (wind and pressure) and location throughout its lifetime. These detailed reports are used by various users for research, NWS verification and historical purposes.

6.8.2 Issuance Guidelines.

6.8.2.1 Creation Software. Word Processor

6.8.2.2 Issuance Criteria. Not applicable

6.8.2.3 Issuance Times. The report will be released as soon as practical after the last advisory on each tropical cyclone.

6.8.2.4 Valid Times. Not applicable.

6.8.2.5 Product Expiration Time. Not applicable.

6.8.3 Technical Description. TCRs will follow the format and content described in this section.

6.8.3.1 UGC Type. Not applicable.

6.8.3.2 Mass News Disseminator Header. Not applicable. Internet product.

6.8.3.3 Content. The TCR is a post-event overview of a tropical cyclone comprised of a narrative describing the overall storm and a detailed listing of 6-hourly location and intensity data in both text and graphic format. NHC issues TCRs for tropical cyclone activity in the Atlantic and eastern North Pacific (north of the equator and east of 140°W) basins. CPHC issues TCRs for tropical cyclone activity in the Central North Pacific (north of the equator between 140°W and 180°). A single report will be jointly issued for systems that were tropical cyclones in both the Eastern and Central Pacific basins. The tropical cyclone report will include landfall and 6-hourly synoptic track and intensity data (i.e. the "best track"). NHC will post reports on the Internet at www.nhc.noaa.gov/pastall.shtml and CPHC at www.prh.noaa.gov/cphc. Reviews at CPHC will be conducted by the director and deputy director of CPHC, warning coordination meteorologist and hurricane program leader.

6.8.3.4 Format. This product is available in industry standard encoding and languages, and may include, but not limited to, ASCII, XML, WML and (HTML).

7. WFO Products.

7.1 Hurricane/Typhoon Local Statements (HLS). WFOs with coastal county responsibilities and selected inland WFOs will issue these segmented 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.**

7.1.1 Mission Connection. The HLS is the primary WFO product for issuing tropical cyclone watches and warnings. Alert the public, media, and local decision makers of potential or actual storm effects 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 to minimize the economic losses as a result of tropical cyclones.

7.1.2 Issuance Guidelines.

7.1.2.1 Creation Software. AWIPS Graphical Hazard Generator (GHG). (For WFO Guam areas outside of the AWIPS graphics domain in Micronesia, by PC.)

7.1.2.2 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 coastal or 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. They are:

Eastern Region	Southern Region	Western Region
Caribou, ME	Brownsville, TX	San Diego, CA
Portland, ME	Corpus Christi, TX	Los Angeles/Oxnard, CA
Boston, MA	Houston/Galveston, TX	
New York City, NY	Lake Charles, LA	Pacific Region
Philadelphia, PA	New Orleans, LA	Honolulu, HI
Baltimore, MD/Washington, DC	Mobile, AL	Guam
Wakefield, VA	Tallahassee, FL	WSO Pago Pago, American Samoa
Newport/Morehead City, NC	Tampa Bay, FL	
Wilmington, NC	Miami, FL	
Charleston, SC	Key West, FL	
	Melbourne, FL	
	Jacksonville, FL	
	San Juan, PR	

The inland WFOs listed below will also issue HLSs when hurricane or tropical storm force winds are expected to impact their area of responsibility. Reference section 7.3.

Albany, NY (selected counties)

Albuquerque, NM	Huntsville, AL	Nashville, TN
Amarillo, TX	Jackson, MS	Norman, OK
Atlanta, GA	Little Rock, AR	San Angelo, TX
Austin/San Antonio, TX	Lubbock, TX	Shreveport, LA
Birmingham, AL	Memphis, TN	Tulsa, OK
El Paso, TX	Midland, TX	
Fort Worth, TX	Morristown, TN	

7.1.2.3 Issuance Times.

a. Initial: The initial HLS should be issued as soon as possible following the first issuance of a tropical storm/hurricane watch/warning for the WFOs area of responsibility. WFO Guam will issue each HLS one hour after the Tropical Cyclone Public Advisory is issued.

b. Subsequent updates: 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.

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.

c. Final: Routine HLSs may cease when the tropical cyclone is no longer a threat to an office's CWA.

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

7.1.2.5 Event Beginning Time. The event beginning time is when the hazardous event is expected to begin. The event beginning time is placed in the P-VTEC line. (WFO Guam dos not issue P-VTEC outside of the AWIPS graphics domain.)

7.1.2.6 Event Ending Time. The event ending time is when the hazardous event is expected to end. The event ending time is placed in the P-VTEC line. A word description (e.g. MONDAY MORNING, TUESDAY AFTERNOON) is not placed in the headline for the marine segment or the first tier of coastal land zones, since there is no event ending time. However, the event ending time is included for the Tropical Cyclone wind watches and warnings issued for inland areas.

7.1.2.7 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.

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

7.1.3.1 UGC Type. HLSs will use the zone (Z) form of the UGC.

7.1.3.2 Mass News Disseminator Header. The HLS MND header block product type line is "(TROPICAL CYCLONE TYPE) (NAME or NUMBER) LOCAL STATEMENT."

7.1.3.3 Content. HLSs will add localized details to Tropical cyclone forecast 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 may 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 forecast 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.

Table 1 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.

In the event where a WFO has previously issued CFW products, Table 2 defines the recommended WFO actions to take when NHC begins issuance of tropical cyclone advisories for the CWA.

Similarly, in the event where a WFO has previously issued MWW products, Table 3 defines the recommended WFO actions to take when NHC begins issuance of tropical cyclone advisories for the CWA.

Table 1. HLS Product Table

Product	Tropical Cyclone Watch/Warning	
	HLS	Stand-alone
Flash Flood Watch/Warning/Statement		X
Tornado Warning		X
Severe Thunderstorm Warning		X1
Coastal Flood Advisory/Watch/Warning/Statement	X2	X2
Special Marine Warning		X3
Severe Weather Statement		X1
Marine Weather Statement		X3
Special Weather Statement	X	
Surf Zone Forecast/Surf Forecast	X	
High Surf Advisory/Warning issued by WFO Honolulu	X	

1 Severe Thunderstorm Warnings (SVR) may be issued as stand-alone products at the discretion of the WFO. However, their use should be confined to peripheral events, such as outer rain bands, prior to the onset of sustained tropical storm or hurricane force winds. If multiple SVR issuances are anticipated, the issuing WFO should contact SPC, adjacent WFOs, and affected Regional Operations Centers (ROCs) to collaborate on the potential need for convective watch products.

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 when tropical cyclone watches or warnings are in effect.

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. Below are details that are further summarized in Table 2.

- A CFW product is in effect for a Coastal Flood Warning, and/or High Surf Advisory or High Surf Warning, and a tropical cyclone *watch* is issued - CFW will **continue** as standalone product along with HLS product.

- A CFW product is in effect for a Coastal Flood Warning, and/or High Surf Warning or High Surf Advisory, 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.

3 WFOs have the option to issue stand-alone special marine warnings (SMWs) 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.

Table 2. CFW Product Actions when Tropical Cyclone Advisories are Subsequently Issued

INITIAL WFO PRODUCT IN EFFECT	SUBSEQUENTLY–ISSUED TROPICAL CYCLONE (TC) ADVISORY	CONTINUE CFW	CANCEL CFW
Coastal Flood Advisory	TC WATCH	X	
Coastal Flood Advisory	TC WARNING		X
Coastal Flood WATCH (CFW)	TC WATCH/WARNING		X
Coastal Flood WARNING (CFW)	TC WATCH	X	

Coastal Flood WARNING (CFW)	TC WARNING		X
High Surf ADVISORY (CFW)	TC WATCH	X	
High Surf ADVISORY (CFW)	TC WARNING		X
High Surf WARNING (CFW) (Pacific, Western Regions only)	TC WATCH	X	
High Surf WARNING (CFW) (Pacific, Western Regions only)	TC WARNING		X

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

Table 3. MWW Product Actions when Tropical Cyclone Advisories are Subsequently Issued

Initial WFO Product In Effect	Subsequently-Issued Tropical Cyclone (TC) Advisory	Continue MWW	Cancel MWW
Storm WATCH (MWW)	TC WATCH/WARNING		X
Storm WARNING (MWW)	TC WATCH	X	
Storm WARNING (MWW)	TC WARNING		X
Gale WATCH (MWW)	TC WATCH/WARNING		X
Gale WARNING (MWW)	TC WATCH	X	
Gale WARNING (MWW)	TC WARNING		X
Hazardous Seas WATCH (MWW)	TC WATCH/WARNING		X
Hazardous Seas WARNING (MWW)	TC WATCH	X	
Hazardous Seas WARNING (MWW)	TC WARNING		X
Small Craft Advisory (MWW)	TC WATCH	X	
Small Craft Advisory (MWW)	TC WARNING		X
Small Craft Advisory for Hazardous Seas (MWW)	TC WATCH	X	
Small Craft Advisory for Hazardous Seas (MWW)	TC WARNING		X
Small Craft Advisory for Winds (MWW)	TC WATCH	X	

Small Craft Advisory for Winds (MWW)	TC WARNING		X

7.1.3.4 Format. As appropriate, the product type line in the Mass News Disseminator header block options are "Hurricane (Name) or Typhoon (Name) Local Statement," "Tropical Storm (Name) Local Statement" , "Tropical Depression (Number) Local Statement" , "Subtropical Storm (Name) Local Statement" or "Subtropical Depression (Number) Local Statement." (WFO Guam will include the JTWC tropical cyclone number in parentheses once a name is provided by RSMC Tokyo.)

Many private sector vendors parse and scroll HLS section information. The vendor's software will key in on the headlines in each VTEC segment, using the ellipsis (...) at the beginning and ending of each headline. NWR broadcasts of the HLS are also connected to the exact formatting of the HLS. Therefore, format consistency (ellipses, carriage returns, exact section wording) of the HLS information is essential.

OVERVIEW BLOCK OF THE HLS WITH SECTION HEADERS

The optional Overview Block describes the expected evolution for the event. It will prioritize the hazards from greatest to least concern. The Overview Block and optional Section Headers may be used to provide information common to all of the VTEC segments which follow. Use of the Overview Block will help decrease the overall length of the HLS (so common information is not repeated in each VTEC segment) and provide increased product compatibility with NOAA Weather Radio (NWR).

After the headline(s), the first section of the HLS may be introduced with the following section headers. The section headers will automatically be generated by the Graphical Hazards Generator (GHG) in the Graphical Forecast Editor (GFE). The section headers in bold will be written exactly as noted below. Each section header is preceded by one dot and followed by three dots. Section headers will be ordered with the most important information or potential impact appearing first. All, some, or none of the following section headers may be used. Additionally, WFOs retain the option to use non-specific headers not covered by one of the section headers below.

.AREAS AFFECTED…
Details of which counties/parishes or cities are included in the HLS.

.WATCHES/WARNINGS…
Watches and warnings in effect and counties/parishes to which they apply.

The watches and warnings will be ordered, primarily by warning type and secondarily by location, as follows:

```
HURRICANE WARNING...FOR COASTAL ZONES
HURRICANE WIND WARNING...FOR INLAND ZONES
HURRICANE WARNING...FOR MARINE ZONES
```

```
TROPICAL STORM WARNING AND HURRICANE WATCH...FOR COASTAL
ZONES
TROPICAL STORM WIND WARNING AND HURRICANE WIND WATCH...FOR
INLAND ZONES
TROPICAL STORM WARNING AND HURRICANE WATCH...FOR MARINE
ZONES
TROPICAL STORM WARNING...FOR COASTAL ZONES
TROPICAL STORM WIND WARNING...FOR INLAND ZONES
TROPICAL STORM WARNING...FOR MARINE ZONES
TROPICAL STORM WATCH...FOR COASTAL ZONES
TROPICAL STORM WIND WATCH...FOR INLAND ZONES
TROPICAL STORM WATCH...FOR MARINE ZONES
```

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

.SITUATION OVERVIEW…

.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. The actions provided here are general in nature.

&&

.NON-SPECIFIC SECTION HEADER- Substitute appropriate header...

.NEXT UPDATE…

VTEC SEGMENTS OF THE HLS

After the optional Overview Block, the HLS next contains VTEC segments. The number of segments will vary depending on the geographic area impacted and the tropical cyclone watches and warnings in effect. The HLS will contain tropical cyclone watches and warnings for the coastal marine zones, coastal land zones, and the inland zones. The VTEC phenomena codes used are:

EVENT NAME	PHENOMENA CODE
TROPICAL STORM	TR
HURRICANE	HU
TROPICAL STORM WIND	TI
HURRICANE WIND	HI
TYPHOON	TY

The VTEC Significance codes for the HLS are:

Warning	W
Watch	A

Statement S

The /S/ significance code may be issued, as deemed necessary by a WFO, to address rumors or other storm-related issues.

The Event Tracking Numbers (ETNs) for the coastal marine zones and the inland zones are assigned by each WFO. These ETNs may not always be the same.

The ETN for the (first tier) coastal land zones is assigned through NHC's Tropical Cyclone Watch Warning (TCV) product. Thus, the TCV ETN and the (first tier) coastal land zone ETN in the HLS will be the same; however, coastal land zone ETNs will usually differ from the marine and inland zone ETNs.

...HEADLINE(s)...

Each section headline begins and ends with ellipses (three dots). Headlines will be automatically generated by the GHG in the GFE. The headlines will be based on VTEC values in each segment. At least one headline is provided in each VTEC segment. The number and type of headlines to be generated is based on forecaster-selected segments.

Additionally, WFOs retain the option to use a non-specific section header which is not covered by the section headers listed below.

...NEW INFORMATION...

Specific new and vital information which you wish to bring to the attention of users. New Information will always be the first section header, except where it is optional in the initial HLS issuance.

...PRECAUTIONARY/PREPAREDNESS ACTIONS...(optional)

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. The actions here are more specific in nature and may be supplemented with wind and surge impact statements, based on the magnitude of the tropical cyclone.

&&

...PROBABILITY TROPICAL STORM/HURRICANE CONDITIONS...(optional)

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

...WINDS...or …WINDS AND SEAS…if marine segment (optional)

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.

...STORM SURGE AND STORM TIDE... (optional)
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 will 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. WFOs will use the same wording as NHC, referencing storm surge information and forecasts as height above ground level, as provided in the TCP product. See NWSI 10-601 section 1.1.3.3f. Additionally, WFOs, as a local option, may include a second reference to local tide datum which emergency managers and other users are familiar with and use for making critical decisions. As an example, one such datum is Mean Lower Low Water (MLLW).

...INLAND FLOODING...(optional)

...TORNADOES...or …TORNADOES AND WATERSPOUTS… if marine segment (optional)

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

CALL-TO-ACTION STATEMENTS IN THE HLS

Generic tropical cyclone Call-To-Action statements (CTAs) have been baselined into the AWIPS Graphical Hazards Generation (GHG) application. The CTAs have been organized to describe the likely impacts, given the expected wind speed and/or storm surge, from a given magnitude tropical storm/hurricane. Some localization of the CTAs is recommended in areas where effects to certain native vegetation (e.g. palm trees), local building characteristics (e.g. lanai screens, skyscrapers), bathymetry, etc. will enhance impacts.

In addition, the relative infrequency of certain magnitude winds/surge may require some local CTA re-wording. CTAs for extreme events (e.g. Category 4 or 5 hurricanes) should be used only for these events. Use of phrases such as “certain death” have not been included in the baseline CTAs, but may be inserted if the extreme nature of the event warrants. However, forecasters should carefully consider the potential benefits before including such deterministic wording.

Example:
This example is for illustrative purposes only and the geographical/meteorological representations may not be accurate. See a complete HLS example in Appendix A.

```
WTUS82 KTBW 251748
HLSTBW

URGENT - IMMEDIATE BROADCAST REQUESTED
```

```
HURRICANE FOX LOCAL STATEMENT
NATIONAL WEATHER SERVICE TAMPA BAY RUSKIN FL
148 PM EDT TUE SEP 25 2007

...OVERVIEW HEADLINE... (optional)

.AREAS AFFECTED... (optional)
TEXT

.WATCHES/WARNINGS... (optional)
TEXT

.STORM INFORMATION... (optional)
TEXT

.SITUATION OVERVIEW... (optional)
TEXT

.PRECAUTIONARY/PREPAREDNESS ACTIONS... (optional)
PRECAUTIONARY/PREPAREDNESS ACTIONS...
TEXT

&&

.NEXT UPDATE... (optional)
TEXT

GMZ850-870-260000-
/O.NEW.KTBW.HU.W.0002.070925T1748Z-000000T0000Z/
COASTAL WATERS FROM TARPON SPRINGS TO SUWANNEE RIVER FL OUT 20 NM-WATERS
FROM TARPON SPRINGS TO SUWANNEE RIVER FL OUT 20 TO 60 NM-
148 PM EDT TUE SEP 25 2007

...HURRICANE WARNING IN EFFECT...

...NEW INFORMATION...
(TEXT)

ETC…

$$

FLZ039-042-048-049-260000-
/O.NEW.KTBW.HU.W.1006.070925T1748Z-000000T0000Z/
LEVY-CITRUS-HERNANDO-PASCO-
148 PM EDT TUE SEP 25 2007

...HURRICANE WARNING IN EFFECT...

...NEW INFORMATION...
(TEXT)
```

```
ETC...

$$

FLZ043-260000-
/O.NEW.KTBW.TI.W.0002.070925T1748Z-070926T0000Z/
SUMTER-
148 PM EDT TUE SEP 25 2007

...TROPICAL STORM WIND WARNING IN EFFECT UNTIL 8 PM EDT THIS
EVENING...

...NEW INFORMATION...
(TEXT)

ETC...

$$
```

This product is available in industry standard encoding and languages, and may include, but not limited to, ASCII, XML, WML and HTML.

Wtaaii cccc ddhhmm
HLSxxx

URGENT – IMMEDIATE BROADCAST REQUESTED
(TROPICAL CYCLONE TYPE) LOCAL STATEMENT
NATIONAL WEATHER SERVICE CITY, STATE
time am/pm time_zone day of week mon dd yyyy

…<Overview headline statement>…(optional)

.AREAS AFFECTED…(optional)

.WATCHES/WARNINGS…(optional)

.STORM INFORMATION…(optional)

.SITUATION OVERVIEW…(optional)

.PRECAUTIONARY/PREPAREDNESS ACTIONS…(optional)
PRECAUTIONARY/PREPAREDNESS ACTIONS…

&&

.NEXT UPDATE….(optional)

stZ001-005>015 (or marine GMZxxx-xxx) ddhhmm-
/k.aaa.cccc.pp.ss####.yymmddThhnnZ-yymmddThhnnZ/ (P-VTEC line)
Zone-zone-zone-
Time am/pm time_zone day mon dd yyyy

...HEADLINE...

...NEW INFORMATION...

...PRECAUTIONARY/PREPAREDNESS ACTIONS...(optional)
PRECAUTIONARY/PREPAREDNESS ACTIONS…

&&

…PROBABILITY TROPICAL STORM/HURRICANE CONDITIONS…(optional)

…WINDS… or …WINDS AND SEAS… for marine segment (optional)

...TORNADOES…or …TORNADOES AND WATERSPOUTS… for marine segment (optional)

$$

stZ001-005>015 (or marine GMZxxx-xxx) ddhhmm-
/k.aaa.cccc.pp.ss####.yymmddThhnnZ-yymmddThhnnZ/ (P-VTEC line)
Zone-zone-zone-
Time am/pm time_zone day mon dd yyyy

...HEADLINE...

...NEW INFORMATION...

...PRECAUTIONARY/PREPAREDNESS ACTIONS...(optional)
PRECAUTIONARY/PREPAREDNESS ACTIONS…

&&

…PROBABILITY TROPICAL STORM/HURRICANE CONDITIONS…(optional)

…WINDS…or …WINDS AND SEAS… for marine segement (optional)

...INLAND FLOODING…(optional)

…TORNADOES…or …TORNADOES AND WATERSPOUTS.. for marine segment (optional)

$$

Figure 15. Hurricane Local Statement format
See a complete example in Appendix A.

7.1.4 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.

7.2 Tropical Storm/Hurricane Wind Watch or Warning. All coastal and inland WFOs listed in Section 7.1.2.2 will issue a Tropical Storm Wind Watch or Warning, or Hurricane Wind Watch or Warning, when a tropical cyclone is expected to spread tropical storm or hurricane force winds inland, using the Hurricane Local Statement. The following WFOs are exempt from this policy and will issue a non-precipitation weather product (NPW) for high wind watches and/or warnings if hurricane or tropical storm winds move into their area of responsibility.

Albany, NY (selected counties)
Binghamton, NY
Buffalo, NY
Burlington, VT
Charleston, WV
Cleveland, OH
Columbia, SC
Greer, SC
Pittsburgh, PA
Raleigh, NC
Roanoke, VA
State College, PA
Wilmington, OH
Flagstaff, AZ
Hanford, CA
Las Vegas, NV
Phoenix, AZ
Tucson, AZ

7.2.1 Mission Connection. Long duration warnings are issued by WFOs to protect lives and property. Watches and warnings provide our users and partners advance notice of hazardous weather events which have the potential to threaten life and property.

7.2.2 Issuance Guidelines.

7.2.2.1 Creation Software. Use AWIPS Graphical Hazards Generator (GHG).

7.2.2.2 Issuance Criteria. A Tropical Cyclone Wind Watch or Warning will be issued when the following criteria are met:

a. Watch - WFOs will issue Tropical Storm/Hurricane Wind Watches for their inland areas when tropical storm/hurricane force winds are possible within the watch area within 48 hours.

b. Warning - WFOs will issue Tropical Storm/Hurricane Wind Warnings for their areas when tropical storm/hurricane force winds are expected within the warning area within 36 hours.

c. 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 wind watches or warnings commensurate with NHC tropical cyclone watches or warnings. Coordination will occur with all impacted offices and NHC before the issuance.

7.2.2.3 Issuance Times. Event driven.

7.2.2.4 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.

7.2.2.5 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.

7.2.3 Technical Description. Follow the format and content described in section 7.1 for Hurricane Local Statements.

7.2.3.1 UGC Type. Use the segmented zone (Z) form of the UGC.

7.2.3.2 Mass News Disseminator Header. Not applicable.

7.2.3.3 Content. Follow guidance provided in section 7.1 – Hurricane Local Statement.

7.2.3.4 Updates and Amendments. For guidance provided in section 7.1 – Hurricane Local Statement.

7.2.3.5 Cancellations and Expirations. WFOs will provide the public, media and emergency management notice that Tropical Storm/Hurricane Wind watches or warnings have expired or been cancelled.

7.2.3.6 Relationship to ZFP Products. The appropriate forecasts will highlight watches and warnings.

7.2.3.7 Format. Use format in section 7.1 for Hurricane Local Statements.

7.3 Tropical Storm/Hurricane Wind Watch/Warning for Subtropical Storms. All coastal and inland WFOs listed in Section 7.1.2.2 will issue a Tropical Storm Wind Watch or Warning, or Hurricane Wind Watch or Warning, when a subtropical storm is expected to spread tropical storm or hurricane force winds inland. Use the same procedures as noted in section 7.1.

The following WFOs are exempt from this policy and will issue a non-precipitation weather product (NPW) for high wind watches and/or warnings if subtropical storm winds move into their area of responsibility.

Albany, NY (selected counties)
Binghamton, NY
Buffalo, NY
Burlington, VT
Charleston, WV
Cleveland, OH
Columbia, SC
Greer, SC
Pittsburgh, PA
Raleigh, NC
Roanoke, VA
State College, PA
Wilmington, OH
Flagstaff, AZ
Hanford, CA
Las Vegas, NV
Phoenix, AZ
Tucson, AZ

7.4 Extreme Wind Warning

7.4.1 Mission Connection. 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 sustained winds of a major hurricane (category 3 or higher), usually associated with the eyewall of a hurricane. 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.

7.4.2 Issuance Guidelines.

7.4.2.1 Creation Software. WFOs will use WarnGen to issue Extreme Wind Warnings.

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

a. Tropical cyclone is a category 3 or greater on the Saffir Simpson Hurricane Wind Scale as designated by NHC, CPHC or JTWC.
b. 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.

7.4.2.3 Issuance Time. Short duration warnings are non-scheduled, event driven products.

7.4.2.4 Valid Time. The warning valid time should be two hours or less. In rare situations, the valid time may be for a three hour period. Forecasters should use good judgment to ensure the valid time of the short duration warning takes into account the geographic size of area warned versus the forward speed of the tropical cyclone. Once the EWW for an area has expired, WFOs should use the HLS or NOW products to provide additional information about the status of tropical cyclone winds for a previously warned area.

7.4.2.5 Product Expiration Time. The product expiration time is the end of the warning valid time.

7.4.3 Technical Description. The EWW will follow the format and content described in this section. WFOs should not use a call to action statement advising the public to go to the lowest floor if the warning area is susceptible to flooding.

7.4.4 UGC Type. County

7.4.5. Mass News Disseminator Broadcast Line. EWWs will include the broadcast line "BULLETIN – EAS ACTIVATION REQUESTED." The term "BULLETIN" is used when information is sufficiently urgent to warrant breaking into a normal broadcast.

7.4.6 Mass News Disseminator Header. The EWW MND header is "EXTREME WIND WARNING".

7.4.7 Updates and Amendments. 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.

7.4.8 Cancellations and Expirations. WFOs may issue SVSs to inform the public when all or portions of an EWW have been canceled or have expired.

7.4.9 Corrections. WFOs will correct Extreme Wind Warnings for significant grammatical errors, format or dissemination code errors, or for counties either omitted or erroneously added to a warning. Corrected warnings will have the same time in the Mass News Dissemination Header and the same Event Tracking Number in the Valid Time Event Code line as the original warning.

7.4.10. Format

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 mon 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)
TIME…MOT…LOC

$$
FORECASTER NAME/NUMBER (OPTIONAL)

Figure 16. Extreme Wind Warning
See complete example in Appendix A.

7.5 Post-Tropical Cyclone Reports (PSH). The PSH is the primary WFO post-tropical cyclone product issued to the public to report and document local tropical cyclone impacts.

7.5.1 Mission Connection. The PSH product is intended to provide the NHC, NWS Headquarters, media, public and emergency management officials with a record of peak tropical cyclone conditions. This data are then used to formulate other post-event reports, news articles and historical records. A standardized format has been introduced for easier post-processing of the data by end users. An example of this format can be found in the appendix.

7.5.2 Issuance Guidelines.

7.5.2.1 Creation Software. AWIPS Post Tropical Cyclone Storm Report software or text editor.

7.5.2.2 Issuance Criteria. All WFOs issuing HLSs will prepare post-storm reports. Inland offices issuing Tropical Storm/Hurricane/Typhoon Wind watches or warnings will also submit reports. Other offices whose county warning area experiences wind gusts greater than 33 knots, flooding, tornadoes, damage or casualties will also submit reports.

7.5.2.3 Issuance Times. Transmit the reports within 5 days following the transmission of the last HLS or Tropical Storm/Hurricane/Typhoon Wind watches or warnings. Amend reports as needed.

7.5.2.4 Valid Times. Not applicable.

7.5.2.5 Product Expiration Time. Not applicable

7.5.3 Technical Description.

7.5.3.1 UGC Type. Not applicable.

7.5.3.2 Mass News Disseminator Header. The PSH header block product type line is "POST-TROPICAL CYCLONE REPORT...(TROPICAL CYCLONE TYPE)(NAME)."

7.5.3.3 Content. Include the following items in the initial report and in any subsequent updated reports:

Sections a and b. 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. NWS offices may include these data in the PSH only when deemed reliable based on the particular facts and circumstances.

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.

Section 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.

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

Section e. Maximum storm surge and storm tide: Reference storm tide to appropriate datums understood by local authorities. The preferred datum for reporting purposes is North American Vertical Datum of 1988 (NAVD). Some areas may still be using the National Geodetic Vertical Datum of 1929 (NGVD) or Mean Lower Low Water (MLLW). 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.

Section 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.

Section 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 data in sections (A, land observations), (B, marine observations), (C, storm total rainfall), and (F, 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

7.5.3.4 Format.

```
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 Appendix A for specific details)
$$
```

Figure 17. Post Tropical Cyclone Report Format
See complete example in Appendix A.

7.6 Information for Service Assessments. CONUS 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 regional headquarters 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.

7.7 Local Storm Reports (LSR). WFOs will prepare these reports in accordance with LSR instructions (Reference directive 10-517).

7.8 Storm Reports. WFOs will prepare these reports in accordance with Storm Data Preparation instruction (Reference directive 10-1605).

8. 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.

9. Procedures for Populating WFO-Generated Wind Forecast Grids for Tropical Cyclone Events. Updates to this directive will take place as better methods for populating WFO-generated wind forecasts are integrated into the Interactive Forecast Preparation System. These instructions are primarily for CONUS WFOs.

9.1 Wind Speed Values Within the 34 kt Wind Radii

0-120 hours
WFOs will use the TCMWindTool to populate wind grids using the latest TPC advisory package. The AWIPS GFE Smart Tool uses the official tropical cyclone forecast center's TCM forecast advisory wind radii. For storm size, WFOs are not to exceed the wind radii specified in the official forecast advisory. For periods when the wind radii are not available from the official forecast advisory, WFOs will be provided output from a climatology-persistence model, but may also coordinate as needed with the tropical cyclone forecast center and with adjacent WFOs.

For storm intensity, the AWIPS GFE Smart Tool uses the full continuum of values, up to the maximum sustained wind speed value provided by the tropical cyclone forecast center through the forecast advisory. WFOs are not to exceed this maximum wind speed forecast.

Within the stated constraints, WFOs will apply local knowledge and mesoscale expertise to produce the final set of explicit/deterministic wind speed forecasts for the County Forecast and Warning Area/Marine Area of Responsibility.

121-168 hours
Use HPC guidance on the location of tropical low pressure systems and associated wind fields and WFO discretion to produce explicit/deterministic wind speed forecasts for all County Forecast and Warning Area/Marine Area of Responsibility grids using a full continuum of wind speeds up to 30 knots. The choice for 30 knots avoids potential confusion which can result from the automated rounding of 33 knots to 35 knots when generating graphical wind barbs, and with associated textual formatters which convert knots to miles per hour (then round to the nearest 5 mph).

9.2 Wind Speed Values Outside the 34 kt Wind Radii
0-168 hours
Use deterministic wind speed values.

9.3 Wind Direction Values Inside or Outside the 34 kt Wind Radii
0-168 hours
Use deterministic wind direction values.

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

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."

APPENDIX A

EXAMPLES OF TROPICAL WEATHER PRODUCTS

Products from National Forecast Centers

Products from Weather Forecast Offices

Example: Tropical Weather Outlook from NHC

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ABNT20 KNHC 011140
TWOAT

TROPICAL WEATHER OUTLOOK
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL
800 AM EDT WED JUN 1 2009

FOR THE NORTH ATLANTIC...CARIBBEAN SEA AND THE GULF OF MEXICO...

THE AREA OF LOW PRESSURE ASSOCIATED WITH A TROPICAL WAVE LOCATED
JUST EAST OF THE WINDWARD ISLANDS HAS BECOME A LITTLE BETTER
ORGANIZED THIS MORNING...AND AN AIR FORCE RECONNAISSANCE AIRCRAFT
IS SCHEDULED TO INVESTIGATE THIS AREA THIS AFTERNOON. ENVIRONMENTAL
CONDITIONS APPEAR FAVORABLE FOR DEVELOPMENT DURING THE NEXT DAY OR TWO
AS THE TROPICAL WAVE MOVES WESTWARD NEAR 15 TO 20 MPH.
REGARDLESS OF WHETHER DEVELOPMENT OCCURS...THIS SYSTEM WILL LIKELY
BRING SQUALLS TO THE WINDWARD ISLANDS DURING THE NEXT DAY OR SO.
THERE IS A HIGH CHANCE...60 PERCENT...OF THIS SYSTEM
BECOMING A TROPICAL CYCLONE DURING THE NEXT 48 HOURS.

THE LARGE AREA OF CLOUDINESS BETWEEN BERMUDA AND NOVA SCOTIA IS
ASSOCIATED WITH AN EXTRATROPICAL LOW.  THERE IS A LOW CHANCE...NEAR 0
PERCENT...OF THIS SYSTEM BECOMING A TROPICAL CYCLONE DURING
THE NEXT 48 HOURS.

A LARGE AREA OF CLOUDINESS AND SHOWERS HAS DEVELOPED OVER THE
NORTHEASTERN GULF OF MEXICO IN ASSOCIATION WITH AN OLD FRONTAL
ZONE.  SOME SLOW DEVELOPMENT OF THIS SYSTEM IS POSSIBLE DURING THE
NEXT DAY OR TWO AS IT REMAINS NEARLY STATIONARY.  THERE IS A MEDIUM
CHANCE...30 PERCENT...OF THIS SYSTEM BECOMING A TROPICAL
CYCLONE DURING THE NEXT 48 HOURS.

ELSEWHERE...TROPICAL CYCLONE FORMATION IS NOT EXPECTED DURING THE
NEXT 48 HOURS.

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FORECASTER NAME
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Example: Tropical Weather Outlook from CPHC

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ACPN50 PHFO 192350
TWOCP

TROPICAL WEATHER OUTLOOK
NWS CENTRAL PACIFIC HURRICANE CENTER HONOLULU HI
200 PM HST SUN SEP 19 2005

FOR THE CENTRAL NORTH PACIFIC...BETWEEN 140W AND 180

1. AN AREA OF THUNDERSTORMS ABOUT 900 MILES SOUTH SOUTHEAST OF HILO
IS ASSOCIATED WITH A WEAK SURFACE TROUGH. THE THUNDERSTORMS ARE
CURRENTLY POORLY ORGANIZED. THE TROUGH WAS MOVING WEST SLOWLY. THERE
IS A LOW CHANCE...20 PERCENT...OF THIS SYSTEM BECOMING A TROPICAL
CYCLONE WITHIN THE NEXT 48 HOURS.
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ELSEWHERE...NO TROPICAL CYCLONES ARE EXPECTED THROUGH 200 PM HST
TUESDAY.

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FUJII
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Example: Special Tropical Weather Outlook from NHC

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ABNT20 KNHC 161145
TWOAT

SPECIAL TROPICAL WEATHER OUTLOOK
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL
1245 PM EDT WED JUL 1 2009

FOR THE NORTH ATLANTIC...CARIBBEAN SEA AND THE GULF OF MEXICO...

SPECIAL OUTLOOK ISSUED TO UPDATE DISCUSSION OF LOW PRESSURE AREA
EAST OF THE WINDWARD ISLANDS.

THE NATIONAL HURRICANE CENTER IS ISSUING ADVISORIES ON TROPICAL
STORM BERTHA...LOCATED ABOUT 335 MILES NORTHEAST OF BERMUDA.

UPDATED...SATELLITE IMAGES AND SURFACE OBSERVATIONS INDICATE THAT THE
AREA OF LOW PRESSURE LOCATED ABOUT 225 MILES EAST OF THE WINDWARD
ISLANDS HAS BECOME BETTER-ORGANIZED AND A TROPICAL DEPRESSION COULD BE
FORMING.  AN AIR FORCE RESERVE HURRICANE HUNTER AIRCRAFT WILL BE
INVESTIGATING THIS SYSTEM THIS AFTERNOON TO DETERMINE IF A TROPICAL
CYCLONE HAS FORMED.  EVEN IF NO DEVELOPMENT OCCURS...LOCALIZED HEAVY
RAINS AND GUSTY WINDS ARE POSSIBLE IN THE WINDWARD ISLANDS TODAY AND
TONIGHT.  ALL INTERESTS IN THE WINDWARD ISLANDS SHOULD MONITOR THE
PROGRESS OF THIS SYSTEM...AND FOR INFORMATION SPECIFIC TO YOUR
AREA...PLEASE CONSULT STATEMENTS FROM YOUR LOCAL WEATHER OFFICE.
THERE IS A HIGH CHANCE...NEAR 100 PERCENT...OF THIS SYSTEM
BECOMING A TROPICAL CYCLONE DURING THE NEXT 48 HOURS.

DISORGANIZED THUNDERSTORM ACTIVITY OFF THE SOUTHWEST FLORIDA COAST IS
ASSOCIATED WITH AN AREA OF LOW PRESSURE.  THIS SYSTEM IS EXPECTED TO
PRODUCE LOCALLY HEAVY RAINS OVER PORTIONS OF THE FLORIDA PENINSULA AS
IT MOVES EASTWARD OR NORTHEASTWARD DURING THE NEXT DAY OR SO.
SIGNIFICANT DEVELOPMENT IS NOT EXPECTED DUE TO PROXIMITY TO LAND.
THERE IS A LOW CHANCE...10 PERCENT...OF THIS SYSTEM BECOMING A
TROPICAL CYCLONE DURING THE NEXT 48 HOURS.

ELSEWHERE...TROPICAL CYCLONE FORMATION IS NOT EXPECTED DURING THE
NEXT 48 HOURS.

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FORECASTER NAME
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Examples: Product Type Lines in Mass News Disseminator Headers for TCP products

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TROPICAL DEPRESSION ONE-E ADVISORY NUMBER 1
TROPICAL STORM ALEX ADVISORY NUMBER 3
HURRICANE ALEX ADVISORY NUMBER 4
SUBTROPICAL STORM GABRIELLE ADVISORY NUMBER 1
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Example: Tropical Cyclone Public Advisory

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WTNT34 KNHC 120359
MIATCPAT4

BULLETIN
HURRICANE IKE ADVISORY NUMBER  42
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL   AL092008
1000 PM CDT THU SEP 11 2008

...IKE CONTINUES TO GROW IN SIZE BUT HAS NOT STRENGTHENED YET...
...HURRICANE WARNING ISSUED FOR NORTHWESTERN GULF COAST...


SUMMARY OF 1000 PM CDT...0300 UTC...INFORMATION
-----------------------------------------------
LOCATION...25.5N 88.4W
ABOUT 580 MI...930 KM ESE OF CORPUS CHRISTI TEXAS
ABOUT 470 MI...760 KM ESE OF GALVESTON TEXAS
MAXIMUM SUSTAINED WINDS...100 MPH...160 KM/HR
PRESENT MOVEMENT...WNW OR 290 DEGREES AT 10 MPH...17 KM/HR
MINIMUM CENTRAL PRESSURE...945 MB...27.91 INCHES


WATCHES AND WARNINGS
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CHANGES WITH THIS ADVISORY...

A HURRICANE WARNING HAS BEEN ISSUED FROM MORGAN CITY LOUISIANA TO
BAFFIN BAY TEXAS.

A TROPICAL STORM WARNING HAS BEEN ISSUED FROM SOUTH OF BAFFIN BAY TO
PORT MANSFIELD TEXAS.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT...

A HURRICANE WARNING IS IN EFFECT FOR...
* MORGAN CITY LOUISIANA TO BAFFIN BAY TEXAS

A TROPICAL STORM WARNING IS IN EFFECT FOR...
* EAST OF MORGAN CITY TO THE MISSISSIPPI-ALABAMA BORDER...INCLUDING
THE CITY OF NEW ORLEANS AND LAKE PONTCHARTRAIN
* SOUTH OF BAFFIN BAY TO PORT MANSFIELD

A HURRICANE WARNING MEANS THAT HURRICANE CONDITIONS ARE EXPECTED
SOMEWHERE WITHIN THE WARNING AREA.  A WARNING IS TYPICALLY ISSUED 36
HOURS BEFORE THE ANTICIPATED FIRST OCCURRENCE OF TROPICAL-STORM-FORCE
WINDS...CONDITIONS THAT MAKE OUTSIDE PREPARATIONS DIFFICULT OR
DANGEROUS.  PREPARATIONS TO PROTECT LIFE AND PROPERTY SHOULD BE
RUSHED TO COMPLETION.

A TROPICAL STORM WARNING MEANS THAT TROPICAL STORM CONDITIONS ARE
EXPECTED SOMEWHERE WITHIN THE WARNING AREA WITHIN THE NEXT 36 HOURS.

FOR STORM INFORMATION SPECIFIC TO YOUR AREA...INCLUDING POSSIBLE
INLAND WATCHES AND WARNINGS...PLEASE MONITOR PRODUCTS ISSUED BY YOUR
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LOCAL WEATHER OFFICE.

DISCUSSION AND 48-HOUR OUTLOOK

AT 1000 PM CDT...0300Z...THE CENTER OF HURRICANE IKE WAS LOCATED NEAR LATITUDE 25.5 NORTH...LONGITUDE 88.4 WEST. IKE IS MOVING TOWARD THE WEST-NORTHWEST NEAR 10 MPH...17 KM/HR. A GENERAL WEST-NORTHWESTWARD MOTION IS EXPECTED OVER THE NEXT DAY OR SO...AND THE CENTER OF IKE SHOULD BE VERY NEAR THE COAST BY LATE FRIDAY.

MAXIMUM SUSTAINED WINDS ARE NEAR 100 MPH...160 KM/HR...WITH HIGHER GUSTS. IKE IS A CATEGORY TWO HURRICANE ON THE SAFFIR-SIMPSON HURRICANE WIND SCALE. IKE IS FORECAST TO BECOME A MAJOR HURRICANE PRIOR TO REACHING THE COASTLINE.

IKE REMAINS A VERY LARGE TROPICAL CYCLONE. HURRICANE FORCE WINDS EXTEND OUTWARD UP TO 115 MILES...185 KM...FROM THE CENTER...AND TROPICAL STORM FORCE WINDS EXTEND OUTWARD UP TO 275 MILES...445 KM.

THE LATEST MINIMUM CENTRAL PRESSURE REPORTED BY A NOAA HURRICANE HUNTER AIRCRAFT WAS 945 MB...27.91 INCHES.

HAZARDS AFFECTING LAND

STORM SURGE... A DANGEROUS STORM SURGE WILL RAISE WATER LEVELS AS MUCH AS 10 TO 15FT ABOVE GROUND LEVEL ALONG THE IMMEDIATE COAST WITHIN THE HURRICANE WARNING AREA NEAR AND TO THE EAST OF WHERE THE CENTER OF IKE MAKES LANDFALL. STORM SURGE WILL RAISE WATER LEVELS AS MUCH AS 5 TO 7 FEET ABOVE GROUND LEVEL ALONG THE IMMEDIATE COAST WITHIN THE TROPICAL STORM WARNING AREA ALONG THE NORTHERN GULF COAST. THE SURGE COULD PENETRATE AS FAR INLAND AS ABOUT 10 MILES FROM THE SHORE WITH DEPTH GRADUALLY DECREASING AS THE WATER MOVES INLAND. NEAR THE COAST...THE SURGE WILL BE ACCOMPANIED BY LARGE AND DESTRUCTIVE WAVES.

WIND...BECAUSE IKE IS A VERY LARGE TROPICAL CYCLONE...WEATHER WILL DETERIORATE ALONG THE COASTLINE LONG BEFORE THE CENTER REACHES THE COAST. HURRICANE CONDITIONS ARE EXPECTED TO REACH NORTHWESTERN GULF COAST WITHIN THE WARNING AREA FRIDAY AFTERNOON. WINDS ARE EXPECTED TO FIRST REACH TROPICAL STORM STRENGTH FRIDAY MORNING...MAKING OUTSIDE PREPARATIONS DIFFICULT OR DANGEROUS. PREPARATIONS TO PROTECT LIFE AND PROPERTY SHOULD BE RUSHED TO COMPLETION.

RAINFALL...IKE IS EXPECTED TO PRODUCE RAINFALL AMOUNTS OF 5 TO 10 INCHES ALONG THE CENTRAL AND UPPER TEXAS COAST AND OVER PORTIONS OF SOUTHWESTERN LOUISIANA...WITH ISOLATED MAXIMUM AMOUNTS OF 15 INCHES POSSIBLE. RAINFALL AMOUNTS OF 1 TO 2 INCHES ARE POSSIBLE OVER PORTIONS OF THE YUCATAN PENINSULA.

NEXT ADVISORY

NEXT INTERMEDIATE ADVISORY...100 AM CDT.
NEXT COMPLETE ADVISORY...400 AM CDT.

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FORECASTER FRANKLIN

Example: Intermediate Public Advisory

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WTNT33 KNHC 221858
TCPAT3

BULLETIN
HURRICANE RITA INTERMEDIATE ADVISORY NUMBER 20A
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL
1 PM CDT THU SEP 22 2005

...RITA WEAKENS A LITTLE FURTHER...REMAINS AN EXTREMELY DANGEROUS
HURRICANE...

SUMMARY OF 1000 PM CDT...0300 UTC...INFORMATION
-----------------------------------------------
LOCATION...25.5N 89.2W
ABOUT 435 MI...700 KM...SE OF GALVESTON TEXAS
ABOUT 430 MI...695 KM...SE OF PORT ARTHUR TEXAS
MAXIMUM SUSTAINED WINDS...150 MPH...240 KM/HR
PRESENT MOVEMENT...WNW OR 290 DEGREES AT 9 MPH...15 KM/HR
MINIMUM CENTRAL PRESSURE...915 MB...27.06 INCHES


WATCHES AND WARNINGS
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CHANGES WITH THIS ADVISORY...

NONE.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT...

A HURRICANE WARNING IS IN EFFECT FOR...
* PORT O'CONNOR TEXAS TO MORGAN CITY LOUISIANA

A TROPICAL STORM WARNING IS IN EFFECT FOR...
* FROM SOUTH OF PORT O'CONNOR TO PORT MANSFIELD TEXAS
* SOUTHEASTERN COAST OF LOUISIANA EAST OF MORGAN CITY TO THE MOUTH OF THE
MISSISSIPPI RIVER

A TROPICAL STORM WATCH IS IN EFFECT FOR...
* FROM NORTH OF THE MOUTH OF THE MISSISSIPPI RIVER TO THE MOUTH OF THE
PEARL RIVER INCLUDING METROPOLITAN NEW ORLEANS AND LAKE PONTCHARTRAIN
* FROM SOUTH OF PORT MANSFIELD TO BROWNSVILLE TEXAS
* FOR THE NORTHEASTERN COAST OF MEXICO FROM RIO SAN FERNANDO NORTHWARD TO
THE RIO GRANDE

A HURRICANE WARNING MEANS THAT HURRICANE CONDITIONS ARE EXPECTED
SOMEWHERE WITHIN THE WARNING AREA.  A WARNING IS TYPICALLY ISSUED 36
HOURS BEFORE THE ANTICIPATED FIRST OCCURRENCE OF TROPICAL-STORM-FORCE
WINDS...CONDITIONS THAT MAKE OUTSIDE PREPARATIONS DIFFICULT OR
DANGEROUS.  PREPARATIONS TO PROTECT LIFE AND PROPERTY SHOULD BE RUSHED
TO COMPLETION.

A TROPICAL STORM WARNING MEANS THAT TROPICAL STORM CONDITIONS ARE
EXPECTED SOMEWHERE WITHIN THE WARNING AREA WITHIN THE NEXT 36 HOURS.

A TROPICAL STORM WATCH MEANS THAT TROPICAL STORM CONDITIONS ARE
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POSSIBLE SOMEWHERE WITHIN THE WATCH AREA WITHIN THE NEXT 48 HOURS.

FOR STORM INFORMATION SPECIFIC TO YOUR AREA...INCLUDING POSSIBLE INLAND WATCHES AND WARNINGS...PLEASE MONITOR PRODUCTS ISSUED BY YOUR LOCAL WEATHER OFFICE.

DISCUSSION AND 48-HOUR OUTLOOK

AT 1 PM CDT...1800 UTC...THE CENTER OF HURRICANE RITA WAS LOCATED NEAR LATITUDE 25.5 NORTH...LONGITUDE 89.2 WEST. RITA IS MOVING TOWARD THE WEST-NORTHWEST NEAR 9 MPH...15 KM/HR. A GRADUAL TURN TO THE NORTHWEST IS EXPECTED DURING THE NEXT 24 TO 36 HOURS.

DATA FROM A NOAA RECONNAISSANCE AIRCRAFT INDICATE THAT MAXIMUM SUSTAINED WINDS HAVE DECREASED TO NEAR 150 MPH...240 KM/HR...WITH HIGHER GUSTS. RITA IS NOW A STRONG CATEGORY FOUR HURRICANE ON THE SAFFIR-SIMPSON HURRICANE WIND SCALE. SOME SLIGHT WEAKENING IS FORECAST DURING THE NEXT 24 HOURS BUT RITA IS EXPECTED TO REMAIN AN EXTREMELY DANGEROUS HURRICANE.

HURRICANE FORCE WINDS EXTEND OUTWARD UP TO 85 MILES...140 KM...FROM THE CENTER...AND TROPICAL STORM FORCE WINDS EXTEND OUTWARD UP TO 185 MILES...295 KM.

LATEST MINIMUM CENTRAL PRESSURE REPORTED BY A NOAA HURRICANE HUNTER PLANE WAS 915 MB...27.01 INCHES.

HAZARDS AFFECTING LAND

WIND...HURRICANE CONDITIONS ARE EXPECTED TO REACH THE NORTHWESTERN GULF COAST WITHIN THE WARNING AREA FRIDAY NIGHT. WINDS ARE EXPECTED TO FIRST REACH TROPICAL STORM STRENGTH FRIDAY AFTERNOON...MAKING OUTSIDE PREPARATIONS DIFFICULT OR DANGEROUS. PREPARATIONS TO PROTECT LIFE AND PROPERTY SHOULD BE RUSHED TO COMPLETION.

STORM SURGE...A DANGEROUS STORM SURGE WILL RAISE WATER LEVELS BY AS MUCH AS 4 FEET ABOVE GROUND LEVEL ALONG THE IMMEDIATE WEST COAST OF FLORIDA IN AREAS OF ONSHORE FLOW SOUTH OF VENICE AND IN FLORIDA BAY. THE SURGE COULD PENETRATE AS FAR INLAND AS ABOUT 30 MILES FROM THE SHORE WITH DEPTH GENERALLY DECREASING AS THE WATER MOVES INLAND. NEAR THE COAST...THE SURGE WILL BE ACCOMPANIED BY LARGE AND DESTRUCTUVE WAVES. STORM SURGE SHOULD BEGIN TO DECREASE ALONG THE EAST COAST OF FLORIDA.

RAINFALL...ACCUMULATIONS OF 8 TO 12 INCHES WITH ISOLATED MAXIMUM AMOUNTSS OF 15 INCHES POSSIBLE ALONG THE PATH OF RITA PARTICULARLY OVER SOUTHEAST TEXAS AND WESTERN LOUISIANA. IN ADDITION...RAINFALL AMOUNTS OF 3 TO 5 INCHES ARE POSSIBLE OVER SOUTHEASTERN LOUISIANA INCLUDING NEW ORLEANS. RAINFALL TOTALS IN EXCESS OF 25 INCHES ARE POSSIBLE FARTHER INLAND AFTER RITA MOVES INLAND.

NEXT ADVISORY

NEXT COMPLETE ADVISORY...400 PM CDT.

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FORECASTER FRANKLIN

Example: Special Public Advisory

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WTNT34 KNHC 130415
TCPAT4

BULLETIN
HURRICANE HUMBERTO SPECIAL ADVISORY NUMBER   4
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL   AL092007
1215 AM CDT THU SEP 13 2007

...HUMBERTO BECOMES A HURRICANE JUST BEFORE LANDFALL...
...HURRICANE FORCE WINDS COVER SMALL AREA NORTHEAST OF CENTER...

SUMMARY OF 1215 AM CDT...0515 UTC...INFORMATION
-----------------------------------------------
LOCATION...29.4N 94.4W
ABOUT 20 MI...30 KM...E OF GALVESTON TEXAS
ABOUT 15 MI...20 KM...S OF HIGH ISLAND TEXAS
MAXIMUM SUSTAINED WINDS...80 MPH...130 KM/HR
PRESENT MOVEMENT...NNE OR 25 DEGREES AT 8 MPH...13 KM/HR
MINIMUM CENTRAL PRESSURE...992 MB...29.29 INCHES


WATCHES AND WARNINGS
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CHANGES WITH THIS ADVISORY...

A HURRICANE WARNING HAS BEEN ISSUED FROM EAST OF HIGH ISLAND TEXAS TO
CAMERON LOUISIANA.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT...

A HURRICANE WARNING IS IN EFFECT FOR...
* EAST OF HIGH ISLAND TEXAS TO CAMERON LOUISIANA

A TROPICAL STORM WARNING IS IN EFFECT FOR...
* EAST OF SARGENT TEXAS TO HIGH ISLAND
* EAST OF CAMERON TO INTRACOASTAL CITY LOUISIANA

THE HURRICANE WARNING FOR HUMBERTO MEANS THAT HURRICANE CONDITIONS ARE
EXPECTED WITHIN THE WARNING AREA WITHIN THE NEXT FEW HOURS.

FOR STORM INFORMATION SPECIFIC TO YOUR AREA...INCLUDING POSSIBLE INLAND
WATCHES AND WARNINGS...PLEASE MONITOR PRODUCTS ISSUED BY YOUR LOCAL
WEATHER OFFICE.


DISCUSSION AND 48-HOUR OUTLOOK
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AT 1215 AM CDT...0515 UTC...THE CENTER OF HURRICANE HUMBERTO WAS LOCATED
NEAR LATITUDE 29.4 NORTH...LONGITUDE 94.4 WEST. HUMBERTO IS MOVING TOWARD
THE NORTH-NORTHEAST NEAR 8 MPH...13 KM/HR. THIS GENERAL DIRECTION OF
MOTION WITH SOME INCREASE IN FORWARD SPEED IS EXPECTED OVER THE NEXT 24
HOURS. ON THE FORECAST TRACK THE CENTER WILL BE CROSSING THE UPPER TEXAS
COAST WITHIN THE NEXT FEW HOURS.

DATA FROM AN AIR FORCE RECONNAISSANCE AIRCRAFT AND DOPPLER RADAR INDICATE
THAT THE MAXIMUM SUSTAINED WINDS HAVE INCREASED TO NEAR 80 MPH...130
KM/HR...WITH HIGHER GUSTS...CONFINED TO A SMALL AREA NORTHEAST OF THE
CENTER. HUMBERTO IS NOW A CATEGORY ONE HURRICANE ON THE SAFFIR-SIMPSON
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HURRICANE WIND SCALE. LITTLE ADDITIONAL STRENGTHENING IS EXPECTED PRIOR TO LANDFALL.

HURRICANE FORCE WINDS EXTEND OUTWARD UP TO 15 MILES...30 KM... NORTHEAST OF THE CENTER...AND TROPICAL STORM FORCE WINDS EXTEND OUTWARD UP TO 60 MILES...95 KM.

MINIMUM CENTRAL PRESSURE RECENTLY REPORTED BY THE AIRCRAFT WAS 992 MB...29.29 INCHES.

HAZARDS AFFECTING LAND

WIND...TROPICAL-STORM-FORCE WINDS ARE ALREADY AFFECTING PORTIONS OF THE UPPER TEXAS COAST. HURRICANE-FORCE WINDS WILL BE SPREADING ONSHORE WITHIN THE WARNING AREA WITHIN THE NEXT COUPLE OF HOURS.

RAINFALL...RAINFALL AMOUNTS OF 5 TO 10 INCHES ARE EXPECTED ALONG THE TRACK OF HUMBERTO THROUGH EASTERN TEXAS AS WELL AS WESTERN AND CENTRAL LOUISIANA...WITH ISOLATED MAXIMUM ACCUMULATIONS OF 15 INCHES POSSIBLE.

STORM SURGE...A DANGEROUS STORM SURGE WILL RAISE WATER LEVELS BY AS MUCH AS 4 FEET ABOVE GROUND LEVEL ALONG THE IMMEDIATE COAST...NEAR AND TO THE EAST OF WHERE THE CENTER MAKES LANDFALL. THE SURGE COULD PENETRATE AS FAR INLAND AS ABOUT TWO MILES FROM THE SHORE WITH DEPTH GENERALLY DECREASING AS THE WATER MOVES INLAND.

TORNADOES...ISOLATED TORNADOES ARE POSSIBLE IN SOUTHEASTERN TEXAS AND SOUTHWESTERN LOUISIANA THROUGH EARLY THURSDAY.

NEXT ADVISORY

NEXT COMPLETE ADVISORY...400 AM CDT.

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FORECASTER MAINELLI/AVILA

Example: Public Advisory Correction

WTNT31 KNHC 240855 CCA
TCPAT3

HURRICANE ANDREW ADVISORY NUMBER 25...CORRECTED
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL AL011992
500 AM EDT MON AUG 24 1992

CORRECTED FOR CENTRAL PRESSURE

BODY OF TEXT

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Example: Subtropical Cyclone Public Advisory

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WTNT31 KNHC 040255
TCPAT1

BULLETIN
SUBTROPICAL STORM ANDREA ADVISORY NUMBER   3
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL  AL012007
1100 PM EDT WED MAY 09 2007

...ANDREA NEARLY STATIONARY...FORECAST TO WEAKEN...

SUMMARY OF 1100 PM EDT...0300 UTC...INFORMATION
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LOCATION...30.5N 79.8W
ABOUT 135 MI...215 KM...SE OF SAVANNAH GEORGIA
ABOUT 115 MI...185 KM...NE OF DAYTONA BEACH FLORIDA
MAXIMUM SUSTAINED WINDS...45 MPH...75 KM/HR
PRESENT MOVEMENT...STATIONARY
MINIMUM CENTRAL PRESSURE...1003 MB...29.62 INCHES


WATCHES AND WARNINGS
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CHANGES WITH THIS ADVISORY...

NONE.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT...

A TROPICAL STORM WATCH IS IN EFFECT FOR...
* ALTAMAHA SOUND GEORGIA SOUTHWARD TO FLAGLER BEACH FLORIDA

A TROPICAL STORM WATCH MEANS THAT TROPICAL STORM CONDITIONS ARE
POSSIBLE SOMEWHERE WITHIN THE WATCH AREA WITHIN THE NEXT 48 HOURS.

FOR STORM INFORMATION SPECIFIC TO YOUR AREA...INCLUDING POSSIBLE
INLAND WATCHES AND WARNINGS...PLEASE MONITOR PRODUCTS ISSUED BY YOUR
LOCAL WEATHER OFFICE.


DISCUSSION AND 48-HOUR OUTLOOK
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AT 1100 PM EDT...0300 UTC...THE CENTER OF SUBTROPICAL STORM ANDREA WAS
LOCATED NEAR LATITUDE 30.5 NORTH...LONGITUDE 79.8 WEST. THE STORM IS
NEARLY STATIONARY AND NO SIGNIFICANT MOTION IS EXPECTED DURING THE
NEXT 24 HOURS.

MAXIMUM SUSTAINED WINDS ARE NEAR 45 MPH...75 KM/HR...WITH HIGHER
GUSTS. SOME WEAKENING IS POSSIBLE DURING THE NEXT DAY OR SO.

WINDS OF TROPICAL STORM FORCE EXTEND OUTWARD UP TO 105 MILES... 165 KM
TO THE EAST OF THE CENTER.

ESTIMATED MINIMUM CENTRAL PRESSURE IS 1003 MB...29.62 INCHES.


HAZARDS AFFECTING LAND
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RAINFALL...ANDREA IS EXPECTED TO PRODUCE TOTAL RAINFALL ACCUMULATIONS
OF 1 TO 2 INCHES ALONG COASTAL AREAS OF THE SOUTHEASTERN UNITED
STATES. ISOLATED MAXIMUM AMOUNTS OF ABOUT 3 INCHES ARE POSSIBLE IN
SOME RAINBANDS.


NEXT ADVISORY
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NEXT INTERMEDIATE ADVISORY...200 AM EDT.
NEXT COMPLETE ADVISORY...500 AM EDT.

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FORECASTER AVILA
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Example: HPC Public Advisory

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PUBLIC ADVISORY NUMBER 55 FOR REMNANTS OF IKE
NWS HYDROMETEOROLOGICAL PREDICTION CENTER CAMP SPRINGS MD AL092008
400 PM CDT SUN SEP 14 2008

...REMNANTS OF IKE RACING NORTHEAST AND PRODUCING HEAVY
RAINFALL...STRONG AND DAMAGING WINDS...

SUMMARY OF 400 PM CDT...2100 UTC...INFORMATION
-----------------------------------------------
LOCATION...41.6N 84.5W
ABOUT 40 MI...64 KM...W OF TOLEDO OHIO
ABOUT 55 MI...88 KM...NE OF FT WAYNE INDIANA
MAXIMUM SUSTAINED WINDS...45 MPH...75 KM/HR
PRESENT MOVEMENT...NE OR 45 DEGREES AT 50 MPH...80 KM/HR
MINIMUM CENTRAL PRESSURE...990 MB...29.23 INCHES

FLOOD AND FLASH FLOOD WATCHES ARE IN EFFECT FOR COASTAL TEXAS INTO
EASTERN LOUISIANA AND CENTRAL MISSISSIPPI. ADDITIONAL FLOOD AND
FLASH FLOOD WATCHES ARE IN EFFECT FOR MUCH OF ILLINOIS...NORTHERN
INDIANA INTO SOUTHERN MICHIGAN.  MANY COUNTIES ARE CURRENTLY UNDER
FLOOD AND FLASH FLOOD WARNINGS FROM THE CENTRAL GULF COAST
NORTHWARD INTO THE MIDDLE MISSISSIPPI VALLEY AND GREAT LAKES
REGION.

THE REMNANTS OF IKE ARE SUPPORTING STRONG AND DAMAGING WINDS THRU
THE LOWER OHIO VALLEY. SEVERAL STATIONS HAVE BEEN REPORTING WINDS
OF 30 TO 40 MPH WITH GUSTS OVER 60 MPH. THIS HAS RESULTED IN
WIDESPREAD DOWNED TREES AND STRUCTUAL DAMAGE TO BUILDINGS.

THE LOW WILL RACE NORTHEASTWARD...ALONG A FRONTAL
BOUNDARY...ACROSS THE LOWER GREAT LAKES THIS EVENING. BY MONDAY
MORNING THE LOW WILL BE MOVING THROUGH THE ST. LAWRENCE RIVER
VALLEY.

MAXIMUM SUSTAINED WINDS ARE 35 TO 45 MPH...65 TO 80 KM/HR...WITH
GUSTS OF 60 TO 70 MPH...95 TO 115 KM/HR

SELECTED HIGH WIND REPORTS SINCE 700 AM SUNDAY

LOUISVILLE KY            75 MPH
COVINGTON KY             74 MPH
HUNTINGBURG IN           67 MPH
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FORT KNOX KY	64 MPH
OWENSBORO KY	63 MPH
WALNUT RIDGE AR	62 MPH
POPULAR BLUFF MO	61 MPH
CINCINNATI/LUNKIN	61 MPH

SELECTED STORM TOTAL RAINFALL AMOUNTS IN INCHES THROUGH 100 PM CDT

...LOUISIANA...	
NATCHITOCHES	3.68
GOLDONNA	2.57
MONROE	2.45
...TEXAS...	
SPRING BRANCH (HARRIS COUNTY)	15.20
CYPRESS CREEK (HARRIS COUNTY)	14.21
HALLS BAYOU (HARRIS COUNTY)	13.94
HARRIS GULLEY (HARRIS COUNTY)	10.71
GOOSE CREEK (HARRIS COUNTY)	10.39
BUFFALO BAYOU (HARRIS COUNTY)	10.12
MISSION BEND	7.37
BEAUMONT/PORT ARTHUR	4.99
HUNTSVILLE	4.90
COLLEGE STATION	3.45
TYLER	2.69
PARIS	2.44
...ARKANSAS...	
FAYETTEVILLE/DRAKE	4.35
HARRISON	2.26
FORT SMITH	2.23
...ILLINOIS...	
DECATUR	5.00
PEORIA	4.74
CAHOKIA	3.69
CHAMPAIGN	3.60
SCOTT AFB	3.42
QUINCY	3.32
...MISSOURI...	
FAIR GROVE	5.52
ASHLAND	5.39
JEFFERSON CITY	5.35
BUFFALO	5.28
LIBERAL	5.25
CROSS TIMBERS	5.18
BROOKFIELD	5.11
COLE CAMP	5.06
PLATTSBURG	5.06
HERMITAGE	5.06
HIGHLANDVILLE	5.02
WHEATLAND	5.02
FORNEY AAF	4.82
COLUMBIA	4.72
...KANSAS...	
MCCUNE	3.80

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COFFEYVILLE                          3.16

...OKLAHOMA...
CLAREMORE                            2.44
MUSKOGEE                             2.38
SAND SPRINGS                         2.10


THE REMNANTS OF IKE WILL CONTINUE TO PRODUCE HEAVY RAINFALL INTO
THIS EVENING OVER THE LOWER GREAT LAKES AS IT MOVES INTO THE ST.
LAWRENCE RIVER VALLEY. MAXIMUM RAINFALL AMOUNTS ARE EXPECTED TO
RANGE FROM 1 TO 3 INCHES WITH ISOLATED HEAVIER TOTALS THROUGH
MONDAY MORNING.

A SEVERAL HOUR PERIOD OF STRONG WINDS WILL ALSO ACCOMPANY THE
SYSTEM FROM NORTHEASTERN OHIO INTO WESTERN PENNSYLVANIA...WESTERN
AND NORTHERN NEW YORK STATE AND NORTHERN VERMONT. WINDS OF 30 TO
50 MPH WILL BE POSSIBLE WITH HIGHER GUSTS. THE STRONGEST WINDS
SHOULD BE OVER HIGHER ELEVATIONS OF WESTERN PENNSYLVANIA...WESTERN
AND NORTHERN NEW YORK AND NORTHERN VERMONT.

THE NEXT ADVISORY WILL BE ISSUED AT 1000 PM CDT SUNDAY BY THE
HYDROMETEOROLOGICAL PREDICTION CENTER.  PLEASE REFER TO YOUR LOCAL
NATIONAL WEATHER SERVICE OFFICE FOR FURTHER INFORMATION ON THIS
STORM.

ECKERT/FRACASSO

FORECAST POSITIONS

INITIAL 14/2100Z 41.6N 84.5W...EXTRATROPICAL
12HR VT 15/0600Z 44.8N 76.7W...EXTRATROPICAL
24HR VT 15/1800Z 49.6N 64.4W...EXTRATROPICAL
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Example: Tropical Cyclone Forecast/Advisory

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ZCZC MIATCMAT4 ALL
TTAA00 KNHC DDHHMM
HURRICANE IKE FORECAST/ADVISORY NUMBER  42
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL   AL092008
1500 UTC THU SEP 11 2008

CHANGES IN WATCHES AND WARNINGS WITH THIS ADVISORY...

A HURRICANE WARNING HAS BEEN ISSUED FROM MORGAN CITY LOUISIANA TO
BAFFIN BAY TEXAS.

A TROPICAL STORM WARNING HAS BEEN ISSUED FROM SOUTH OF BAFFIN BAY TO
PORT MANSFIELD TEXAS.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT...

A HURRICANE WARNING IS IN EFFECT FOR...
* MORGAN CITY LOUISIANA TO BAFFIN BAY TEXAS

A TROPICAL STORM WARNING IS IN EFFECT FOR...
* EAST OF MORGAN CITY TO THE MISSISSIPPI-ALABAMA BORDER...INCLUDING
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THE CITY OF NEW ORLEANS AND LAKE PONTCHARTRAIN
* SOUTH OF BAFFIN BAY TO PORT MANSFIELD

HURRICANE CENTER LOCATED NEAR 25.5N  88.4W AT 11/1500Z
POSITION ACCURATE WITHIN  10 NM

PRESENT MOVEMENT TOWARD THE WEST-NORTHWEST OR 290 DEGREES AT   9 KT

ESTIMATED MINIMUM CENTRAL PRESSURE  945 MB
MAX SUSTAINED WINDS  85 KT WITH GUSTS TO 105 KT.
64 KT.......100NE 100SE  30SW  60NW.
50 KT.......150NE 150SE  90SW 140NW.
34 KT.......230NE 240SE 150SW 180NW.
12 FT SEAS..330NE 240SE 240SW 400NW.
WINDS AND SEAS VARY GREATLY IN EACH QUADRANT.  RADII IN NAUTICAL
MILES ARE THE LARGEST RADII EXPECTED ANYWHERE IN THAT QUADRANT.

REPEAT...CENTER LOCATED NEAR 25.5N  88.4W AT 11/1500Z
AT 11/1200Z CENTER WAS LOCATED NEAR 25.3N  88.0W

FORECAST VALID 12/0000Z 25.9N  90.0W
MAX WIND  90 KT...GUSTS 110 KT.
64 KT...100NE 100SE  30SW  60NW.
50 KT...150NE 150SE  90SW 140NW.
34 KT...230NE 240SE 150SW 180NW.

FORECAST VALID 12/1200Z 26.6N  92.0W
MAX WIND  95 KT...GUSTS 115 KT.
64 KT...100NE 100SE  50SW  60NW.
50 KT...150NE 150SE  90SW 140NW.
34 KT...230NE 240SE 150SW 180NW.

FORECAST VALID 13/0000Z 27.8N  94.2W
MAX WIND 105 KT...GUSTS 130 KT.
64 KT...100NE 100SE  50SW  60NW.
50 KT...150NE 150SE  90SW 120NW.
34 KT...230NE 240SE 150SW 160NW.

FORECAST VALID 13/1200Z 29.5N  95.9W...INLAND
MAX WIND 100 KT...GUSTS 120 KT.
50 KT...120NE 125SE  75SW  90NW.
34 KT...180NE 240SE 120SW 120NW.

FORECAST VALID 14/1200Z 34.5N  94.0W...INLAND
MAX WIND  35 KT...GUSTS  45 KT.
34 KT... 75NE  75SE  50SW  50NW.

EXTENDED OUTLOOK. NOTE...ERRORS FOR TRACK HAVE AVERAGED NEAR 225 NM
ON DAY 4 AND 300 NM ON DAY 5...AND FOR INTENSITY NEAR 20 KT EACH DAY

OUTLOOK VALID 15/1200Z 38.0N  85.0W...POST-TROP/EXTRATROP
MAX WIND  25 KT...GUSTS  35 KT.

OUTLOOK VALID 16/1200Z...ABSORBED

REQUEST FOR 3 HOURLY SHIP REPORTS WITHIN 300 MILES OF 25.5N  88.4W

NEXT ADVISORY AT 11/2100Z
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FORECASTER FRANKLIN
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Example: Tropical Cyclone Forecast Discussion

```
WTNT45 KNHC 230300
TCDAT5

HURRICANE ISIDORE DISCUSSION NUMBER  28
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL  AL102002
1100 PM EDT SUN SEP 22 2002

THE CENTER HAS MOVED SOUTH OF THE SHORT-TERM FORECAST TRACK...AND
MOVED INLAND OVER NORTHWESTERN YUCATAN A FEW HOURS AGO.  THUS THE
CYCLONE IS WEAKENING...AND WILL CONTINUE TO DO SO UNTIL IT MOVES BACK
OVER WATER.  ASIDE FROM THE INTERACTION WITH LAND...ATMOSPHERIC AND
OCEANIC CONDITIONS REMAIN QUITE FAVORABLE FOR INTENSIFICATION SO THE
OFFICIAL FORECAST CALLS FOR ISIDORE TO RECOVER ITS PREVIOUS INTENSITY
AND MORE...PRESUMING THAT IT RE-ENTERS THE GULF TOMORROW.  THE
OFFICIAL WIND SPEED FORECASTS BY DAYS 2 AND 3 ARE BACK TO THOSE SHOWN
IN THE PREVIOUS ADVISORY.  HOWEVER...TROPICAL CYCLONE INTENSITY
FORECASTING HAS A LOT OF UNCERTAINTIES.  IF THE INNER CORE STRUCTURE
IS SEVERELY DISRUPTED BY THE CYCLONES TRANSIT OVER LAND...IT MAY NOT
BE ABLE TO RE-INTENSIFY AS MUCH AS ANTICIPATED.

THE FORWARD SPEED APPEARS TO HAVE SLOWED AND CURRENT MOTION IS
ESTIMATED TO BE A SOUTHWESTWARD DRIFT...220/4.  THE MORE SOUTHERLY
MOTION WAS PROBABLY THE RESULT OF MID-LEVEL RIDGING TO THE WEST-
NORTHWEST OF ISIDORE.  GLOBAL MODELS AND THE GFDL HURRICANE MODEL
AGREE THAT THE SYSTEM WILL TURN BACK TO THE WEST AND NORTHWEST  WITHIN
12 TO 24 HOURS.  AFTERWARDS...A MID-TROPOSPHERIC RIDGE SHOULD BEGIN TO
BUILD TO THE EAST OF ISIDORE...WHICH SHOULD INDUCE A MORE NORTHWARD
MOTION.  NOT MUCH INCREASE IN FORWARD SPEED IS EXPECTED UNTIL A MID-
LATITUDE TROUGH BEGINS TO AFFECT THE SYSTEM...PROBABLY BEYOND THIS
FORECAST PERIOD.

THE THREE-DAY FORECAST POINT IMPLIES AN EVENTUAL THREAT TO EITHER THE
NORTHWEST OR NORTHERN GULF OF MEXICO COAST...HOWEVER IT IS STILL TOO
EARLY TO BE MORE SPECIFIC ABOUT THE THREAT.

FORECAST POSITIONS AND MAX WINDS

INITIAL     23/0300Z 20.8N  89.5W    90 KT
12HR VT     23/1200Z 20.7N  90.3W    80 KT
24HR VT     24/0000Z 21.0N  91.0W    95 KT
36HR VT     24/1200Z 21.8N  92.0W   115 KT
48HR VT     25/0000Z 22.8N  92.5W   125 KT
72HR VT     26/0000Z 25.0N  93.0W   125 KT
96HR VT     27/0000Z 27.0N  92.5W   100 KT
120HR VT    28/0000Z 29.0N  92.0W    90 KT

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FORECASTER PASCH
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Example: Tropical Cyclone Update

Example 1 - TCU to convey changes in storm information (with summary section)

```
ZCZC MIATCUAT4 ALL
TTAA00 KNHC DDHHMM
TROPICAL STORM CLAUDETTE TROPICAL CYCLONE UPDATE
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL   AL042009
1215 PM EDT SUN AUG 16 2009

...DEPRESSION BECOMES TROPICAL STORM CLAUDETTE...

DATA FROM THE NOAA DOPPLER RADAR IN TALLAHASSEE FLORIDA INDICATE
THAT SURFACE WINDS ASSOCIATED WITH THE DEPRESSION HAVE INCREASED TO 40
MPH...65 KM/HR...INDICATING THAT THE DEPRESSION HAS BECOME A TROPICAL
STORM.

...SUMMARY OF 1215 PM EDT INFORMATION...
LOCATION...29.1N 85.1W
ABOUT 40 MI...65 KM...S OF APALACHICOLA FLORIDA
MAXIMUM SUSTAINED WINDS...40 MPH...65 KM/HR
PRESENT MOVEMENT...NW OR 325 DEGREES AT 14 MPH...22 KM/HR
MINIMUM CENTRAL PRESSURE...1008 MB...29.77 INCHES

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FORECASTER ROBERTS/BRENNAN


NNNN
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Example 2 - TCU to notify users that change in status is forthcoming (no summary section)

```
ZCZC MIATCUAT2 ALL
TTAA00 KNHC DDHHMM
TROPICAL DEPRESSION SEVEN TROPICAL CYCLONE UPDATE
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL   AL072008
200 PM EDT MON AUG 25 2008

PRELIMINARY REPORTS FROM AN AIR FORCE HURRICANE HUNTER AIRCRAFT
INDICATE THAT TROPICAL DEPRESSION SEVEN HAS STRENGTHENED.  A SPECIAL
ADVISORY WILL BE ISSUED WITHIN THE NEXT 30 MINUTES TO UPGRADE THE
DEPRESSION TO A TROPICAL STORM...TO UPDATE THE INTENSITY
FORECAST...AND TO ISSUE NEW WATCHES AND WARNINGS FOR HISPANIOLA.

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FORECASTER PASCH

NNNN
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Example: Tropical Cyclone Position Estimate

```
ZCZC MEATIEST4 ALL
TTAA00 KNHC DDHHMM
HURRICANE IKE TROPICAL CYCLONE POSITION ESTIMATE
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL   AL092008
900 PM CDT FRI SEP 12 2008

AT 9 PM CDT...0200Z...THE CENTER OF LARGE HURRICANE IKE WAS
ESTIMATED BY NOAA DOPPLER WEATHER RADARS...AND AIR FORCE RESERVE AND
NOAA RECONNAISSANCE AIRCRAFT...TO BE NEAR LATITUDE 28.5 NORTH...
LONGITUDE 94.3 WEST OR ABOUT 65 MILES...105 KM...SOUTH-SOUTHEAST OF
GALVESTON TEXAS AND ABOUT 90 MILES...140 KM...SOUTH-SOUTHWEST OF
BEAUMONT TEXAS.

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FORECASTER STEWART
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Example: Text Wind Speed Probabilities

```
ZCZC MIAPWSAT3 ALL
TTAA00 KNHC DDHHMM
TROPICAL STORM HANNA WIND SPEED PROBABILITIES NUMBER  12
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL   AL082008
0300 UTC SUN AUG 31 2008

AT 0300Z THE CENTER OF TROPICAL STORM HANNA WAS LOCATED NEAR
LATITUDE 22.9 NORTH...LONGITUDE 67.8 WEST WITH MAXIMUM SUSTAINED
WINDS NEAR 45 KTS...50 MPH...85 KM/HR.

Z INDICATES COORDINATED UNIVERSAL TIME (GREENWICH)
   ATLANTIC STANDARD TIME (AST)...SUBTRACT 4 HOURS FROM Z TIME
   EASTERN  DAYLIGHT TIME (EDT)...SUBTRACT 4 HOURS FROM Z TIME
   CENTRAL  DAYLIGHT TIME (CDT)...SUBTRACT 5 HOURS FROM Z TIME


I.  MAXIMUM WIND SPEED (INTENSITY) PROBABILITY TABLE

CHANCES THAT THE MAXIMUM SUSTAINED (1-MINUTE AVERAGE) WIND SPEED OF
THE TROPICAL CYCLONE WILL BE WITHIN ANY OF THE FOLLOWING CATEGORIES
AT EACH OFFICIAL FORECAST TIME DURING THE NEXT 5 DAYS.
PROBABILITIES ARE GIVEN IN PERCENT.  X INDICATES PROBABILITIES LESS
THAN 1 PERCENT.


      - - - MAXIMUM WIND SPEED (INTENSITY) PROBABILITIES - - -

VALID TIME   12Z SUN 00Z MON 12Z MON 00Z TUE 00Z WED 00Z THU 00Z FRI
FORECAST HOUR   12      24      36      48      72      96     120
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DISSIPATED       X       1       1       2       4       6       9
TROP DEPRESSION  6       7       7      11      14      15      16
TROPICAL STORM  90      78      65      57      50      49      42
HURRICANE        4      14      27      30      32      31      33
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
HUR CAT 1        3      12      23      24      23      22      21
HUR CAT 2        X       1       3       5       5       6       9
HUR CAT 3        1       1       1       2       3       2       2
```

HUR CAT 4	X	X	X	X	1	1	1
HUR CAT 5	X	X	X	X	X	X	X
FCST MAX WIND	45KT	50KT	55KT	55KT	55KT	55KT	60KT

II. WIND SPEED PROBABILITY TABLE FOR SPECIFIC LOCATIONS

CHANCES OF SUSTAINED (1-MINUTE AVERAGE) WIND SPEEDS OF AT LEAST
...34 KT (39 MPH... 63 KPH)...
...50 KT (58 MPH... 93 KPH)...
...64 KT (74 MPH...119 KPH)...
FOR LOCATIONS AND TIME PERIODS DURING THE NEXT 5 DAYS

PROBABILITIES FOR LOCATIONS ARE GIVEN AS IP(CP) WHERE
IP IS THE PROBABILITY OF THE EVENT BEGINNING DURING AN INDIVIDUAL TIME PERIOD (INDIVIDUAL PROBABILITY)
(CP) IS THE PROBABILITY OF THE EVENT OCCURRING BETWEEN 00Z SUN AND THE FORECAST HOUR (CUMULATIVE PROBABILITY)

PROBABILITIES ARE GIVEN IN PERCENT
X INDICATES PROBABILITIES LESS THAN 1 PERCENT
PROBABILITIES FOR 34 KT AND 50 KT ARE SHOWN AT A GIVEN LOCATION WHEN THE 5-DAY CUMULATIVE PROBABILITY IS AT LEAST 3 PERCENT.
PROBABILITIES FOR 64 KT ARE SHOWN WHEN THE 5-DAY CUMULATIVE PROBABILITY IS AT LEAST 1 PERCENT.

- - - - WIND SPEED PROBABILITIES FOR SELECTED LOCATIONS - - - -

TIME PERIODS		FROM 00Z SUN TO 12Z SUN	FROM 12Z SUN TO 00Z MON	FROM 00Z MON TO 12Z MON	FROM 12Z MON TO 00Z TUE	FROM 00Z TUE TO 00Z WED	FROM 00Z WED TO 00Z THU	FROM 00Z THU TO 00Z FRI
FORECAST HOUR		(12)	(24)	(36)	(48)	(72)	(96)	(120)
LOCATION	KT							
MOREHEAD CITY	34	X	X(X)	X(X)	X(X)	X(X)	1(1)	2(3)
WILMINGTON NC	34	X	X(X)	X(X)	X(X)	X(X)	1(1)	3(4)
COLUMBIA SC	34	X	X(X)	X(X)	X(X)	X(X)	X(X)	3(3)
MYRTLE BEACH	34	X	X(X)	X(X)	X(X)	X(X)	1(1)	3(4)
CHARLESTON SC	34	X	X(X)	X(X)	X(X)	X(X)	1(1)	4(5)
AUGUSTA GA	34	X	X(X)	X(X)	X(X)	X(X)	1(1)	2(3)
SAVANNAH GA	34	X	X(X)	X(X)	X(X)	X(X)	2(2)	3(5)
JACKSONVILLE	34	X	X(X)	X(X)	X(X)	X(X)	2(2)	4(6)
DAYTONA BEACH	34	X	X(X)	X(X)	X(X)	1(1)	2(3)	5(8)
ORLANDO FL	34	X	X(X)	X(X)	X(X)	1(1)	3(4)	4(8)
COCOA BEACH FL	34	X	X(X)	X(X)	X(X)	1(1)	4(5)	5(10)

COCOA BEACH FL	50	X	X(X)	X(X)	X(X)	X(X)	2(2)	1(3)
FT PIERCE FL	34	X	X(X)	X(X)	X(X)	1(1)	5(6)	5(11)
FT PIERCE FL	50	X	X(X)	X(X)	X(X)	X(X)	2(2)	1(3)
W PALM BEACH	34	X	X(X)	X(X)	X(X)	2(2)	5(7)	5(12)
W PALM BEACH	50	X	X(X)	X(X)	X(X)	X(X)	2(2)	1(3)
MIAMI FL	34	X	X(X)	X(X)	X(X)	2(2)	5(7)	5(12)
MIAMI FL	50	X	X(X)	X(X)	X(X)	X(X)	1(1)	2(3)
MIAMI FL	64	X	X(X)	X(X)	X(X)	X(X)	1(1)	X(1)
MARATHON FL	34	X	X(X)	X(X)	X(X)	1(1)	3(4)	5(9)
MARATHON FL	50	X	X(X)	X(X)	X(X)	X(X)	1(1)	3(4)
MARATHON FL	64	X	X(X)	X(X)	X(X)	X(X)	X(X)	1(1)
KEY WEST FL	34	X	X(X)	X(X)	X(X)	1(1)	2(3)	4(7)
MARCO ISLAND	34	X	X(X)	X(X)	X(X)	1(1)	2(3)	5(8)
FT MYERS FL	34	X	X(X)	X(X)	X(X)	1(1)	2(3)	4(7)
FT MYERS FL	64	X	X(X)	X(X)	X(X)	X(X)	X(X)	1(1)
VENICE FL	34	X	X(X)	X(X)	X(X)	X(X)	2(2)	3(5)
TAMPA FL	34	X	X(X)	X(X)	X(X)	X(X)	2(2)	3(5)
CEDAR KEY FL	34	X	X(X)	X(X)	X(X)	X(X)	2(2)	2(4)
GFMX 290N 850W	34	X	X(X)	X(X)	X(X)	X(X)	1(1)	2(3)
GRAND BAHAMA	34	X	X(X)	X(X)	1(1)	3(4)	7(11)	7(18)
GRAND BAHAMA	50	X	X(X)	X(X)	X(X)	X(X)	3(3)	3(6)
GRAND BAHAMA	64	X	X(X)	X(X)	X(X)	X(X)	1(1)	1(2)
NEW PROVIDENCE	34	X	X(X)	1(1)	2(3)	7(10)	8(18)	5(23)
NEW PROVIDENCE	50	X	X(X)	X(X)	X(X)	2(2)	3(5)	3(8)
NEW PROVIDENCE	64	X	X(X)	X(X)	X(X)	X(X)	1(1)	2(3)
ANDROS	34	X	X(X)	1(1)	2(3)	6(9)	8(17)	5(22)
ANDROS	50	X	X(X)	X(X)	X(X)	2(2)	2(4)	2(6)
ANDROS	64	X	X(X)	X(X)	X(X)	X(X)	1(1)	1(2)
GREAT EXUMA	34	X	1(1)	4(5)	6(11)	10(21)	8(29)	4(33)
GREAT EXUMA	50	X	X(X)	X(X)	2(2)	3(5)	3(8)	2(10)
GREAT EXUMA	64	X	X(X)	X(X)	1(1)	X(1)	1(2)	1(3)
SAN SALVADOR	34	X	3(3)	10(13)	10(23)	11(34)	7(41)	5(46)
SAN SALVADOR	50	X	X(X)	1(1)	4(5)	6(11)	3(14)	2(16)
SAN SALVADOR	64	X	X(X)	X(X)	1(1)	2(3)	2(5)	1(6)
MAYAGUANA	34	1	3(4)	14(18)	11(29)	9(38)	4(42)	3(45)
MAYAGUANA	50	X	X(X)	3(3)	3(6)	5(11)	2(13)	1(14)
MAYAGUANA	64	X	X(X)	1(1)	1(2)	2(4)	1(5)	X(5)
GRAND TURK	34	1	5(6)	12(18)	5(23)	7(30)	3(33)	2(35)
GRAND TURK	50	X	X(X)	2(2)	2(4)	3(7)	1(8)	1(9)
GRAND TURK	64	X	X(X)	X(X)	1(1)	1(2)	X(2)	X(2)
HAVANA	34	X	X(X)	X(X)	X(X)	X(X)	2(2)	2(4)

```
CIENFUEGOS      34  X   X( X)   X( X)   X( X)   1( 1)   2( 3)   3( 6)

CAMAGUEY        34  X   X( X)   X( X)   X( X)   4( 4)   3( 7)   3(10)

GUANTANAMO BAY  34  X   X( X)   2( 2)   1( 3)   4( 7)   4(11)   2(13)
GUANTANAMO BAY  50  X   X( X)   X( X)   X( X)   1( 1)   1( 2)   1( 3)

MONTEGO BAY     34  X   X( X)   X( X)   X( X)   X( X)   2( 2)   1( 3)

KINGSTON        34  X   X( X)   X( X)   X( X)   1( 1)   1( 2)   1( 3)

LES CAYES       34  X   X( X)   1( 1)   X( 1)   2( 3)   2( 5)   1( 6)

PORT-AU-PRINCE  34  X   X( X)   1( 1)   1( 2)   3( 5)   2( 7)   1( 8)

CAPE BEATA      34  X   X( X)   X( X)   1( 1)   1( 2)   1( 3)   1( 4)

PUERTO PLATA    34  X   2( 2)   3( 5)   3( 8)   4(12)   2(14)   1(15)

SANTO DOMINGO   34  X   1( 1)   X( 1)   1( 2)   2( 4)   1( 5)   1( 6)

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FORECASTER ROBERTS
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Example: Graphical Wind Speed Probabilities
An example of this graphic can be found on the internet at:
http://www.nhc.noaa.gov/aboutnhcgraphics.shtml

Example: Graphical Storm Surge Probabilities
An example of this graphic can be found on the internet at:
http://www.nhc.noaa.gov/aboutnhcgraphics.shtml

Example: Tropical Cyclone Watch Warning Product (TCV)

```
WTNT81 KNHC
TCVAT1

ALPHA WATCH/WARNING BREAKPOINTS/ADVISORY NUMBER 10
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL AL012006
1000 AM EST THU DEC 14 2006

.HURRICANE ALPHA

NCZ095-097-098-100-101-SCZ034-046-142100-
/O.NEW.KNHC.HU.W.1001.061214T1500Z-000000T0000Z/
1000 AM EST THU DEC 14 2006

SOUTH-SANTEE-RIVER-SC                33.12N 79.27W
CAPE-LOOKOUT-NC                      34.60N 76.53W

$$

GAZ116-117-118-119-138-139-140-141-154-166-SCZ043-047-048-049-050-
051-142100-
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/O.NEW.KNHC.HU.A.1001.061214T1500Z-000000T0000Z/
1000 AM EST THU DEC 14 2006

FERNANDINA-BEACH-FL                  30.66N 81.44W
SOUTH-SANTEE-RIVER-SC                33.12N 79.27W

$$


NCZ017-102-103-104-142100-
/O.NEW.KNHC.HU.A.1001.061214T1500Z-000000T0000Z/
1000 AM EST THU DEC 14 2006

CAPE-LOOKOUT-NC                      34.60N 76.53W
NC/VA-BORDER                         36.55N 75.87W

$$

NCZ080-081-093-094-142100-
/O.NEW.KNHC.HU.A.1001.061214T1500Z-000000T0000Z/
1000 AM EST THU DEC 14 2006

PAMLICO-SOUND-NC                     35.35N 75.85W

$$

NCZ015-016-032-045-046-047-142100-
/O.NEW.KNHC.HU.A.1001.061214T1500Z-000000T0000Z/
1000 AM EST THU DEC 14 2006

ALBEMARLE-SOUND-NC                   36.05N 76.00W

$$

ATTN...WFO...AKQ...MHX...JAX...ILM...CHS...
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Example: Tropical Cyclone Summary – Fixes (WFO Honolulu/CPHC)

```
TXPS41 PHFO 091728
TCSSP1

SOUTH PACIFIC TROPICAL CYCLONE SUMMARY - FIXES
NWS CENTRAL PACIFIC HURRICANE CENTER HONOLULU HI
1723 UTC THU APR 09 2009

A. TROPICAL DISTURBANCE TEST

B. 09/1630Z

C. 8.1S

D. 163.9E

E. MTSAT

F. T1.5/2.0/S0.0/24 HOURS

G. IR
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```
H. REMARKS...CURVE BAND WRAPPING .20 ON LOG 10 SPIRAL. POORLY
DEFINED LOW LEVEL CIRCULATION CENTER POSITON BASED ON ANIMATION.

I. ADDL POSITIONS
   09/1254Z  8.0S  163.3E  AMSU

$$
MORRISON
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Example: Tropical Weather Discussion

```
AXNT20 KNHC 032345
TWDAT

TROPICAL WEATHER DISCUSSION
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL
705 PM EST TUE NOV 03 2009

TROPICAL WEATHER DISCUSSION FOR NORTH AMERICA...CENTRAL
AMERICA...GULF OF MEXICO...CARIBBEAN SEA...NORTHERN SECTIONS
OF SOUTH AMERICA...AND ATLANTIC OCEAN TO THE AFRICAN COAST
FROM THE EQUATOR TO 32N. THE FOLLOWING INFORMATION IS BASED
ON SATELLITE IMAGERY...METEOROLOGICAL ANALYSIS...WEATHER
OBSERVATIONS...AND RADAR.

BASED ON 1800 UTC SURFACE ANALYSIS AND SATELLITE IMAGERY
THROUGH 2230 UTC.

...SPECIAL FEATURE...
A 1008 MB LOW IS CENTERED OVER THE SW CARIBBEAN SEA NEAR 10N81W.
SCATTERED MODERATE/ISOLATED STRONG CONVECTION IS FROM 9N-12N
BETWEEN 79W-83W. THE LOW IS EXPECTED TO MOVE LITTLE OVER THE
NEXT DAY OR SO. UPPER LEVEL WINDS APPEAR FAVORABLE FOR FURTHER
DEVELOPMENT. THERE IS A MEDIUM CHANCE...30 TO 50 PERCENT...FOR
THIS SYSTEM TO BECOME A TROPICAL CYCLONE DURING THE NEXT 48 HRS.

...TROPICAL WAVES...

EASTERN CARIBBEAN SEA TROPICAL WAVE IS ALONG 68W S OF 16N MOVING
W NEAR 20 KT. THE WAVE COINCIDES WITH A DEEP LAYER MOISTURE
MAXIMUM OBSERVED IN TOTAL PRECIPITABLE WATER IMAGERY. SCATTERED
STRONG CONVECTION IS INLAND OVER VENEZUELA AND COLOMBIA FROM
4N-7N BETWEEN 66W-70W. SIMILAR ACTIVITY IS NEAR THE VENEZUELA
COASTLINE FROM 10N-12N BETWEEN 68W-72W. ISOLATED
SHOWERS/POSSIBLE THUNDERSTORMS ARE FROM 13N-16N BETWEEN 65W-70W.

...ITCZ...

THE ITCZ AXIS IS CENTERED ALONG 5N9W 6N22W 8N32W 9N41W 10N53W
10N66W. SCATTERED MODERATE/STRONG CONVECTION IS FROM 4N-8N
BETWEEN 9W-16W. A SURFACE TROUGH IS EMBEDDED WITHIN THE AXIS
FROM 11N30W TO 5N35W SUPPORTING A FEW ISOLATED SHOWERS NEAR
5N36W. A SECOND EMBEDDED SURFACE TROUGH IS FROM 12N41W TO 8N42W
SUPPORTING SHOWERS/THUNDERSTORMS NEAR 10N42W. ISOLATED MODERATE/
STRONG CONVECTION IS FROM 9N-15N BETWEEN 43W-59W.
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```
...DISCUSSION...

THE GULF OF MEXICO...
A STATIONARY FRONT EXTENDS FROM S FLORIDA ACROSS THE SE GULF
TO THE BAY OF CAMPECHE ALONG 25N81W 23N85W 22N92W 18N93W.
SCATTERED SHOWERS COVER THE SW GULF FROM 20N-26N BETWEEN
90W-97W. STRONG NE WINDS ARE BEHIND THE FRONT IN THE SW GULF AS
WELL. IN FACT...A GALE WARNING IS IN EFFECT FOR THE AREA S OF
21N W OF 94W. THE FRONT IS SUPPORTED BY A SHORTWAVE UPPER LEVEL
TROUGH EXTENDING DOWN CENTRAL MEXICO PROVIDING MOIST SWLY FLOW
ALOFT ACROSS THE WRN GULF. THE DIFFLUENT FLOW AROUND THE BASE OF
THIS UPPER TROUGH IS ALSO ENHANCING THE SHOWER ACTIVITY IN THE
SW GULF ALONG WITH SURFACE CONVERGENCE NEAR THE FRONT.
ELSEWHERE...A SURFACE RIDGE BUILDS ACROSS THE NW GULF IN THE
WAKE OF THE FRONT. AN UPPER LEVEL RIDGE ALONG WITH STRONG
SUBSIDENCE COVER THE SE GULF. EXPECT STRONG WINDS AND SHOWER
ACTIVITY TO CONTINUE OVER THE SW GULF. [text continues]
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Example: Aviation Tropical Cyclone Advisory

```
FKPA22 PHFO 140250
TCAPA2

HURRICANE TEST ICAO ADVISORY NUMBER  2
NWS CENTRAL PACIFIC HURRICANE CENTER HONOLULU HI   CP012008
0300 UTC TUE AUG 14 2008

TC ADVISORY
DTG:                        20080814/0300Z
TCAC:                       PHFO
TC:                         TEST
NR:                         012
PSN:                        N1554 W15200
MOV:                        WNW 14KT
C:                          0957HPA
MAX WIND:                   105KT
FCST PSN + 06 HR:           140900 N1615 W15254
FCST MAX WIND + 06 HR:      105KT
FCST PSN + 12 HR:           141500 N1636 W15348
FCST MAX WIND + 12 HR:      105KT
FCST PSN + 18 HR:           142100 N1706 W15500
FCST MAX WIND + 18 HR:      105KT
FCST PSN + 24 HR:           150300 N1736 W15612
FCST MAX WIND + 24 HR:      100KT
RMK                         The forecast position information in this
                            product is interpolated from official
                            forecast data valid at 0000, 0600, 1200,
                            and 1800Z.
NXT MSG:                    20080814/0900Z

$$
```

Example: Tropical Cyclone Track and Watch/Warning graphic
An example of this graphic can be found on the internet at:
http://www.nhc.noaa.gov/aboutnhcgraphics.shtml

Example: Cumulative Wind Distribution graphic
An example of this graphic can be found on the internet at:
http://www.nhc.noaa.gov/aboutnhcgraphics.shtml

Example: Tropical Cyclone Wind Field graphic
An example of this graphic can be found on the internet at:
http://www.nhc.noaa.gov/aboutnhcgraphics.shtml

Example: Maximum Wind Speed Probability Table
An example of this table can be found on the internet at:
http://www.nhc.noaa.gov/aboutnhcgraphics.shtml

Example: Hurricane Local Statement
The example illustrates the proper formatting, including VTEC, of a segmented HLS. Its intent is not for it to be perfectly correct or logical according to the meteorology or geographic area.

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WTUS82 KMFL 170941
HLSMFL

URGENT - IMMEDIATE BROADCAST REQUESTED
TROPICAL STORM FAY LOCAL STATEMENT
NATIONAL WEATHER SERVICE MIAMI FL
541 AM EDT SUN AUG 17 2008

...HURRICANE AND TROPICAL STORM WATCHES ISSUED FOR PORTIONS OF SOUTH
FLORIDA...

.AREAS AFFECTED...
THIS LOCAL STATEMENT PROVIDES IMPORTANT INFORMATION AND RECOMMENDED
ACTIONS FOR PEOPLE AND MARINE INTERESTS IN SELECT COUNTIES AND COASTAL
WATER LEGS OF SOUTH FLORIDA.

.WATCHES/WARNINGS...

A HURRICANE WATCH IS IN EFFECT FOR COASTAL COLLIER...MAINLAND
MONROE...AND FAR SOUTH MIAMI DADE COUNTIES.

A HURRICANE WATCH IS IN EFFECT FROM EAST CAPE SABLE TO BONITA BEACH
OUT 20 NM AND FROM CHOKOLOSKEE TO BONITA BEACH 20 TO 60 NM.

A TROPICAL STORM WATCH IS IN EFFECT FOR COASTAL PALM BEACH...COASTAL
BROWARD...AND COASTAL MIAMI DADE COUNTIES.

A TROPICAL STORM WIND WATCH IS IN EFFECT FOR METRO PALM BEACH...INLAND
PALM BEACH...METRO BROWARD...INLAND BROWARD...METRO MIAMI
DADE...INLAND MIAMI DADE...INLAND COLLIER...GLADES...AND HENDRY
COUNTIES.

A TROPICAL STORM WATCH IS IN EFFECT FOR THE COASTAL WATERS FROM OCEAN
REEF TO JUPITER INLET OUT 60 NAUTICAL MILES...BISCAYNE BAY...AND LAKE
```

OKEECHOBEE.

.STORM INFORMATION...
AT 500 AM EDT...THE CENTER OF TROPICAL STORM FAY WAS LOCATED NEAR LATITUDE 19.7 NORTH...LONGITUDE 77.3 WEST OR ABOUT 460 MILES SOUTHEAST OF MIAMI AND 525 MILES SOUTHEAST OF NAPLES.

FAY IS MOVING TOWARD THE WEST-NORTHWEST NEAR 13 MPH. A TURN TO THE NORTHWEST WITH A DECREASE IN FORWARD SPEED IS EXPECTED WITHIN THE NEXT 24 HOURS.

MAXIMUM SUSTAINED WINDS ARE NEAR 50 MPH WITH HIGHER GUSTS. SOME STRENGTHENING IS FORECAST DURING THE NEXT 24 HOURS AND FAY COULD BE APPROACHING HURRICANE STRENGTH WHEN IT REACHES CENTRAL CUBA.

.SITUATION OVERVIEW...
WHEN MAKING DECISIONS...DO NOT FOCUS ON THE EXACT FORECAST TRACK. IT IS TOO EARLY TO PROVIDE EXACT WIND AND SURGE FORECAST VALUES FOR SPECIFIC LOCATIONS. A GENERAL CONCERN SHOULD BE FOR THE POSSIBILITY OF AT LEAST MINOR TO MODERATE DAMAGE SOMEWHERE WITHIN SOUTH FLORIDA. THE SYSTEM IS FORECAST TO SLOW DOWN AS IT MOVES ACROSS THE SOUTHEAST GULF OF MEXICO AND IN THE GENERAL DIRECTION OF THE WEST FLORIDA COAST. SO AT THIS TIME THERE IS CONCERN WITH POTENTIALLY HEAVY AND FLOOD-PRODUCING RAIN ACROSS PORTIONS OF SOUTH FLORIDA. GIVEN THE DIRECTION OF APPROACH THERE IS ALSO THE POSSIBILITY OF ISOLATED TORNADOES IN RAIN BANDS WELL AHEAD OF THE SYSTEM.

.PRECAUTIONARY/PREPAREDNESS ACTIONS...
PRECAUTIONARY/PREPAREDNESS ACTIONS...

FOR THOSE UNDER A WATCH...NOW IS THE TIME TO BEGIN PREPARING YOUR HOME OR BUSINESS ACCORDING TO YOUR HURRICANE DISASTER PLAN. LISTEN FOR POSSIBLE WARNINGS AND BE READY TO EVACUATE IF NECESSARY. HEED THE ADVICE OF LOCAL OFFICIALS AND COMPLY WITH ANY ORDERS THAT ARE ISSUED.

SMALL CRAFT SHOULD RETURN TO PORT OR SEEK SAFE HARBOR. FOR INTERESTS AT PORTS...DOCKS...AND MARINAS...IT IS RECOMMENDED THAT YOU PERFORM THE PRESCRIBED PREPARATIONS ACCORDING TO YOUR EMERGENCY OPERATIONS PLAN FOR TROPICAL CYCLONES. IF YOU LIVE ON A BOAT...BEGIN TO SAFELY SECURE YOUR CRAFT AND MAKE PLANS TO LEAVE IT FOR ADEQUATE LAND BASED SHELTER. LISTEN FOR POSSIBLE WARNINGS.

FOR ADDITIONAL PRECAUTIONARY AND PREPAREDNESS INFORMATION...PLEASE REFER TO THE DETAILED RECOMMENDATIONS RELATIVE TO YOUR LOCATION AS FURTHER DESCRIBED BY YOUR LOCAL NATIONAL WEATHER SERVICE OFFICE AND YOUR COUNTY EMERGENCY MANAGEMENT.

&&

.NEXT UPDATE...
THE NEXT LOCAL STATEMENT WILL BE ISSUED BY THE NATIONAL WEATHER SERVICE IN MIAMI AROUND NOON OR SOONER IF CONDITIONS WARRANT.

FLZ069-075-174-171600-
/O.CON.KMFL.HU.A.1006.000000T0000Z-000000T0000Z/
COASTAL COLLIER-FAR SOUTH MIAMI DADE-MAINLAND MONROE-
655 AM EDT SUN AUG 17 2008

...HURRICANE WATCH IN EFFECT...

...NEW INFORMATION...

AT 5 AM A HURRICANE WATCH HAS BEEN ISSUED FOR THE AREA.

...PRECAUTIONARY/PREPAREDNESS ACTIONS...
PRECAUTIONARY/PREPAREDNESS ACTIONS...
COLLIER COUNTY EMERGENCY MANAGEMENT IS ADVISING RESIDENTS WEST OF TAMIAMI TRAIL TO MAKE EVACUATION PLANS. EVACUATION ORDERS MAY BE PUT IN PLACE LATER TODAY.

&&

...PROBABILITY TROPICAL STORM/HURRICANE CONDITIONS...
THE CHANCE FOR HURRICANE CONDITIONS AT THIS TIME IS LESS THAN OR EQUAL TO 5 PERCENT. THE CHANCE FOR TROPICAL STORM CONDITIONS AT THIS TIME IS 45 PERCENT TO 55 PERCENT. THE MOST LIKELY PERIOD OF ONSET OF TROPICAL STORM CONDITIONS IS MONDAY EVENING.

...WINDS...
AS TROPICAL STORM FAY MOVES CLOSER...THE THREAT FOR SUSTAINED HIGH WINDS IS LIKELY TO INCREASE. THE LATEST FORECAST IS FOR STRONG TROPICAL STORM FORCE WINDS FROM LATE MONDAY NIGHT TO TUESDAY MORNING. TROPICAL STORM FORCE WINDS ARE CURRENTLY FORECAST TO BEGIN AFFECTING THE AREA MONDAY EVENING.

...STORM SURGE AND STORM TIDE...
AT THIS TIME...IT IS TOO EARLY TO PROVIDE DETAILED INFORMATION ON WHAT THE SURGE IMPACT COULD SPECIFICALLY BE ALONG THE SOUTHWEST FLORIDA COAST AS IT IS HIGHLY DEPENDENT ON THE EXACT TRACK...SIZE AND INTENSITY OF THE STORM. GIVEN THESE PROSPECTS...RESIDENTS ARE ADVISED TO MONITOR THE LATEST INFORMATION AND BE READY TO EVACUATE IF ORDERED TO DO SO AS THE STORM NEARS AND BECOMES MORE LIKELY THAT THEIR LOCATION WOULD BE IMPACTED IN SOME WAY BY THE STORM SURGE.

$$

GMZ656-657-676-171600-
/O.CON.KMFL.HU.A.0001.000000T0000Z-000000T0000Z/
COASTAL WATERS FROM CHOKOLOSKEE TO BONITA BEACH, FL OUT 20 NM-COASTAL WATERS FROM EAST CAPE SABLE TO CHOKOLOSKEE, FL OUT 20 NM-GULF WATERS FROM CHOKOLOSKEE TO BONITA BEACH, FL EXTENDING FROM 20 TO 60 NM-
655 AM EDT SUN AUG 17 2008

...HURRICANE WATCH IN EFFECT...

...NEW INFORMATION...

AT 5 AM A HURRICANE WATCH HAS BEEN ISSUED FOR THE AREA.

...PROBABILITY TROPICAL STORM/HURRICANE CONDITIONS...
THE CHANCE FOR HURRICANE CONDITIONS AT THIS TIME IS 5 PERCENT TO 10 PERCENT. THE CHANCE FOR TROPICAL STORM CONDITIONS AT THIS TIME IS 45 PERCENT TO 55 PERCENT. THE MOST LIKELY PERIOD OF ONSET OF TROPICAL STORM CONDITIONS IS MONDAY EVENING.

...WINDS AND SEAS...
AS TROPICAL STORM FAY MOVES CLOSER...THE THREAT FOR SUSTAINED HIGH WINDS IS LIKELY TO INCREASE. THE LATEST FORECAST IS FOR STRONG TROPICAL STORM FORCE WINDS FROM LATE MONDAY NIGHT TO TUESDAY MORNING. TROPICAL STORM FORCE WINDS ARE CURRENTLY FORECAST TO BEGIN AFFECTING

THE AREA MONDAY EVENING.

SEAS WILL LIKELY BEGIN TO INCREASE EARLY MONDAY MORNING. MARINERS ARE ADVISED TO RETURN TO PORT AND INITIATE PREPARATIONS TO SECURE THEIR VESSELS.

...TORNADOES AND WATERSPOUTS...
AS TROPICAL STORM FAY MOVES CLOSER...THE THREAT FOR WATERSPOUTS WILL INCREASE. THE GREATEST WATERSPOUT THREAT WILL BE WITH THE OUTER BANDS OF FAY.

$$

FLZ168-172-173-171600-
/O.CON.KMFL.TR.A.1006.000000T0000Z-000000T0000Z/
COASTAL BROWARD-COASTAL MIAMI DADE-COASTAL PALM BEACH-
655 AM EDT SUN AUG 17 2008

...TROPICAL STORM WATCH IN EFFECT...

...NEW INFORMATION...

AT 5 AM A TROPICAL STORM WATCH HAS BEEN ISSUED FOR THE AREA.

...PRECAUTIONARY/PREPAREDNESS ACTIONS...
PRECAUTIONARY/PREPAREDNESS ACTIONS...

EMERGENCY MANAGERS OFFICIALS ADVISE RESIDENTS REMAIN ON THE ALERT IN CASE FORECAST PROJECTIONS CHANGE AND EVACUATION ORDERS BECOME NECESSARY.

&&

...PROBABILITY TROPICAL STORM/HURRICANE CONDITIONS...
THERE IS LITTLE CHANCE FOR HURRICANE CONDITIONS AT THIS TIME. THE CHANCE FOR TROPICAL STORM CONDITIONS AT THIS TIME IS 30 PERCENT TO 50 PERCENT. THE MOST LIKELY PERIOD OF ONSET OF TROPICAL STORM CONDITIONS IS MONDAY EVENING.

...WINDS...
AS TROPICAL STORM FAY MOVES CLOSER...THE THREAT FOR SUSTAINED HIGH WINDS IS LIKELY TO INCREASE. THE LATEST FORECAST IS FOR TROPICAL STORM FORCE WINDS FROM LATE MONDAY NIGHT TO TUESDAY MORNING WITH THE MAIN THREAT CONFINED AT THIS TIME TO SOUTHERN PORTIONS OF THE AREA OR MIAMI DADE COUNTY. ONLY WINDY CONDITIONS ARE FORECAST AT THE PRESENT TIME ELSEWHERE. CONTINUE TO MONITOR THE FORECASTS IN CASE SIGNIFICANT CHANGES EVOLVE.

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AMZ610-630-650-651-670-671-171600-
/O.CON.KMFL.TR.A.0001.000000T0000Z-000000T0000Z/
BISCAYNE BAY-COASTAL WATERS FROM DEERFIELD BEACH TO OCEAN REEF, FL OUT 20 NM-COASTAL WATERS FROM JUPITER INLET TO DEERFIELD BEACH, FL OUT20 NM-LAKE OKEECHOBEE-WATERS FROM DEERFIELD BEACH TO OCEAN REEF, FL EXTENDING FROM
20 NM TO THE TERRITORIAL WATERS OF THE BAHAMAS-WATERS FROM JUPITER INLET TO DEERFIELD BEACH, FL EXTENDING FROM 20 NM TO 60 NM-
655 AM EDT SUN AUG 17 2008

...TROPICAL STORM WATCH IN EFFECT...

...NEW INFORMATION...

AT 5 AM A TROPICAL STORM WATCH HAS BEEN ISSUED FOR THE AREA.

...PROBABILITY TROPICAL STORM/HURRICANE CONDITIONS...
THERE IS LITTLE CHANCE FOR HURRICANE CONDITIONS AT THIS TIME. THE CHANCE FOR TROPICAL STORM CONDITIONS AT THIS TIME IS 40 PERCENT TO 50 PERCENT FOR LAKE OKEECHOBEE AND 30 TO 40 PERCENT ELSEWHERE ACROSS THE AREA. THE MOST LIKELY PERIOD OF ONSET OF TROPICAL STORM CONDITIONS IS MONDAY AFTERNOON FOR THE SOUTHERN PORTIONS OF THE ATLANTIC COASTAL WATERS AND LATE MONDAY NIGHT FOR LAKE OKEECHOBEE.

...WINDS AND SEAS...
AS TROPICAL STORM FAY MOVES CLOSER...THE THREAT FOR SUSTAINED HIGH WINDS IS LIKELY TO INCREASE. THE LATEST FORECAST IS FOR BORDERLINE TROPICAL STORM FORCE WINDS FROM MONDAY AFTERNOON TO MONDAY NIGHT FOR BISCAYNE BAY AND THE ADJACENT COASTAL WATERS. FOR THE BROWARD AND PALM BEACH WATERS...WINDS ARE FORECAST TO REMAIN BELOW TROPICAL STORM. HOWEVER...MARINERS ARE ADVISED TO KEEP MONITORING THE FORECAST IN CASE SIGNIFICANT CHANGES OCCUR.

FOR LAKE OKEECHOBEE...THE LATEST FORECAST IS FOR STRONG TROPICAL STORM FORCE WINDS ON TUESDAY WITH TROPICAL STORM FORCE WINDS BEGINNING SOMETIME EARLY TUESDAY MORNING.

SEAS WILL LIKELY BEGIN TO INCREASE EARLY MONDAY MORNING. MARINERS ARE ADVISED TO RETURN TO PORT AND INITIATE PREPARATIONS TO SECURE THEIR VESSELS.

...STORM SURGE AND STORM TIDE...
AT THIS TIME...IT IS TOO EARLY TO PROVIDE DETAILED INFORMATION ON WHAT THE SURGE IMPACT COULD BE SPECIFICALLY ACROSS LAKE OKEECHOBEE AS IT IS HIGHLY DEPENDENT ON THE EXACT TRACK...SIZE AND INTENSITY OF THE STORM. RESIDENTS ARE ADVISED TO MONITOR THE LATEST INFORMATION AS IT BECOMES AVAILABLE.

...TORNADOES AND WATERSPOUTS...
AS TROPICAL STORM FAY MOVES CLOSER...THE THREAT FOR WATERSPOUTS WILL INCREASE. THE GREATEST WATERSPOUT THREAT WILL BE WITH THE OUTER BANDS OF FAY.

$$

FLZ063-066>068-070>074-171600-
/O.CON.KMFL.TI.A.0001.000000T0000Z-080820T0000Z/
GLADES-HENDRY-INLAND BROWARD-INLAND COLLIER-INLAND MIAMI DADE-INLAND
PALM BEACH-METRO BROWARD-METRO MIAMI DADE-METRO PALM BEACH-
655 AM EDT SUN AUG 17 2008

...TROPICAL STORM WIND WATCH IN EFFECT THROUGH TUESDAY EVENING...

...NEW INFORMATION...

AT 5 AM A TROPICAL STORM WIND WATCH HAS BEEN ISSUED FOR THE AREA.

...PRECAUTIONARY/PREPAREDNESS ACTIONS...
PRECAUTIONARY/PREPAREDNESS ACTIONS...
EMERGENCY MANAGERS OFFICIALS ACROSS INLAND COLLIER…GLADES…AND HENDRY

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COUNTIES ADVISE MOBILE HOMES RESIDENTS TO MAKE EVACUATION PLANS.
EVACUATION ORDERS MIGHT BE ISSUED LATER TODAY OR EARLY MONDAY.

&&

...PROBABILITY OF HURRICANE/TROPICAL STORM CONDITIONS...
THE CHANCE FOR HURRICANE CONDITIONS AT THIS TIME IS VERY SMALL. THE
CHANCE FOR TROPICAL STORM CONDITIONS AT THIS TIME IS 40 PERCENT TO 50
PERCENT. THE MOST LIKELY PERIOD OF ONSET OF TROPICAL STORM CONDITIONS
IS MONDAY EVENING.

...WINDS...
AS TROPICAL STORM FAY MOVES CLOSER...THE THREAT FOR SUSTAINED HIGH
WINDS IS LIKELY TO INCREASE.  THE LATEST FORECAST IS FOR STRONG
TROPICAL STORM FORCE WINDS FROM LATE MONDAY NIGHT TO TUESDAY MORNING.
TROPICAL STORM FORCE WINDS ARE CURRENTLY FORECAST TO BEGIN AFFECTING
THE AREA MONDAY EVENING.

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Example: Extreme Wind Warning (EWW)

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WFUS52 KTBW 131938
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
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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
TIME...MOT...LOC 1935 200DEG 17KT 2665 8210

$$
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Example: SVS followup for EWW

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WWUS52 KTBW 132015
SVSTBW

SEVERE WEATHER STATEMENT
NATIONAL WEATHER SERVICE TAMPA BAY - RUSKIN FL
415 PM EDT FRI AUG 13 2004

FLC071-132030-
/O.CAN.KTBW.EW.W.0013.000000T0000Z-040813T2100Z
LEE-
415 PM CDT FRI AUG 13 2004

...EXTREME WIND WARNING CANCELLED FOR LEE COUNTY...

EXTREME WINDS...ASSOCIATED WITH THE EYEWALL OF HURRICANE CHARLEY...
HAVE MOVED NORTHEAST OF LEE COUNTY.  THUS THE EXTREME WIND WARNING HAS
BEEN CANCELLED FOR LEE COUNTY.

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

$$
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Example: Short Term Forecast (NOWcast)

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FPUS71 KMOB 192130
NOWMOB

SHORT TERM FORECAST
NATIONAL WEATHER SERVICE MOBILE AL
430 PM CDT SAT AUG 19 1995

ALZ051>064-MSZ067-075-076-078-079-192330-
BALDWIN- MOBILE-HANCOCK-HARRISON-JACKSON
0430 PM CDT SAT AUG 19 1995

.NOW...
...HURRICANE GARY WILL MOVE ACROSS BALDWIN AND MOBILE COUNTIES BY 530
PM...
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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: Post-Tropical Cyclone Report

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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  LON       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
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LOCATION ID LAT LON DEG DECIMAL	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 ID LAT LON DEG DECIMAL	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
DADE CITY 28.3 -82.3	PASCO	STLF1	2.62

PINELLAS PARK PINELLAS PINPK 4.10
27.9 -82.7

REMARKS: NONE.

D. INLAND FLOODING...

LEVY...NUMEROUS REPORTS OF LOCALIZED FRESH WATER FLOODING IN URBAN AREAS.

CITRUS...LOCALIZED FRESH WATER FLOODING REPORTED IN SEVERAL AREAS.

HILLSBOROUGH...LOCALIZED FRESH WATER FLOODING WAS OBSERVED.

REMARKS: NONE.

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
LEVY	G	CEDAR KEY	4.09	6.74	13/0800	MINOR
PINELLAS	G	CLEARWATER	2.42	4.02	13/0900	MINOR
MANATEE		COQUINA BEACH	4.33	6.78	13/0700	MAJOR

MAJOR BEACH EROSION AT COQUINA BEACH WHERE THE SAND WAS DUG OUT 2 FEET DEEP AND HALF THE BEACH DISAPPEARED.

PINELLAS		INDIAN SHORES	3.56	6.45	13/0800	MODERATE

MODERATE BEACH EROSION REPORTED AT INDIAN SHORES.

CITRUS		NORTHERN COAST	4.00	N/A	13/1000	UNKNOWN

COUNTY EMERGENCY MANAGEMENT REPORTED A 3 TO 4 FOOT SURGE FROM HOMOSASSA TO JUST SOUTH OF INGLIS.

REMARKS: DATE AND TIME ESTIMATED FOR MANATEE PINELLAS AND CITRUS COUNTIES.

F. TORNADOES...

(DIST)CITY/TOWN LAT LON(DEG DECIMAL)	COUNTY	DATE/ TIME(UGC)	EF SCALE (IF KNOWN)
DESCRIPTION			
3 NE WAUCHULA 27.6 -81.8	HARDEE	12/0650	EF0

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	DEATHS	INJURIES	EVACUATIONS	DESCRIPTION
LEVY	0	0	100	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.
CITRUS	0	0	25	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.
PASCO	0	0	0	4 FOOT SURGE UP AND DOWN THE COUNTY COAST LINE. WAS NOT HIGH ENOUGH TO FLOOD PROPERTY...EVEN AT HIGH TIDE.
HILLSBOROUGH	0	0	0	A COUPLE OF TREES ON HOUSES. FRESH WATER FLOODING AND BAY OVERSPRAY CLOSED PARTS OF BAY SHORE BOULEVARD FOR A TIME.
MANATEE	0	0	0	NO PROBLEMS.
SARASOTA	0	0	0	NO PROBLEMS.

&&

Legend:
I-Incomplete Data
E-Estimated

$$

APPENDIX B

TROPICAL CYCLONE ASSESSMENT AND WARNING PRODUCT IDENTIFIERS

AREA	WMO	AWIPS
Caribbean	CA	#
North Atlantic and Caribbean	NT	AT
East Pacific	PZ	EP
Central Pacific	PA	CP
West Pacific	PW	WP
North Pacific	PN	
West North Pacific	PQ	#
South Pacific	PS	#
Indian Ocean	IO	#
South Indian Ocean	XS	#

Issuing Office	WMO CCCC
WFO HFO/CPHC - Honolulu	PHFO
WFO Guam	PGUM
JTWC - Pearl Harbor	PGTW
NHC - Miami	KNHC
HPC - Camp Springs, Maryland	KWNH
NAVPACMETOCCEN - Naval Pacific Metr. And Oceanography Center - Pearl Harbor	PHNC
Offutt AFB	KGWC

PRODUCT TITLE	WMO HEADER	AWIPS PRODUCT IDENTIFIER (NNNXXX)
Tropical Weather Outlook		
Atlantic Basin	ABNT20 KNHC	TWOAT
Eastern Pacific	ABPZ20 KNHC	TWOEP
Central Pacific	ACPN50 PHFO	TWOCP
San Juan - Spanish	ACCA62 TJSJ	TWOSPN
Western Pacific	ABPW10 PGTW	N/A
Indian Ocean	ABIO10 PGTW	N/A
Tropical Weather Discussion		
Atlantic Basin	AXNT20 KNHC	TWDAT
Eastern Pacific	AXPZ20 KNHC	TWDEP

PRODUCT TITLE	WMO HEADER	AWIPS PRODUCT IDENTIFIER (NNNXXX)
Tropical/Subtropical Cyclone Public Advisory		
Atlantic Basin	WTNT/31-35/ KNHC	TCPAT/1-5/
San Juan - Spanish	WTCA/41-45/ TJSJ	TCPSP/1-5/
Eastern Pacific	WTPZ/31-35/ KNHC	TCPEP/1-5/
Central Pacific	WTPA/31-35/ PHFO	TCPCP/1-5/
western North Pacific	WTPQ/31-35/ PGUM	TCPPQ/1-5/
Public Advisory from HPC		
Conterminous US - HPC issued	WTNT/31-35/ KWNH	TCPAT/1-5/
Tropical Cyclone Surface Wind Speed Probabilities Text Product		
Atlantic	FONT/11-15/ KNHC	PWSAT/1-5/
East Pacific	FOPZ/11-15/ KNHC	PWSEP/1-5/
Central Pacific	FOPA/11-15/ PHFO	PWSCP/1-5/
Tropical/Subtropical Cyclone Forecast/Advisory		
Atlantic Basin	WTNT/21-25/ KNHC	TCMAT/1-5/
Eastern Pacific	WTPZ/21-25/ KNHC	TCMEP/1-5/
Central Pacific	WTPA/21-25/ PHFO	TCMCP/1-5/
Tropical Cyclone Discussion		
Atlantic Basin	WTNT/41-45/ KNHC/	TCDAT/1-5/
Eastern Pacific	WTPZ/41-45/ KNHC	TCDEP/1-5/
Central Pacific	WTPA/41-45/ PHFO	TCDCP/1-5/
Tropical Cyclone Valid Time Event Code Product		
Atlantic Basin	WTNT/81-85/ KNHC	TCVAT/1-5/
East Pacific Basin	WTPZ/81-85/ KNHC	TCVEP/1-5/
Central Pacific Basin	WTPA/81-85/ PHFO	TCVCP/1-5/
Prognostic Reasoning of Warnings for NW Pacific	WDPN/31-36/ PGTW	N/A
Tropical Cyclone Position Estimate		
Atlantic Basin	WTNT/51-55/ KNHC	TCEAT/1-5/
Eastern Pacific	WTPZ/51-55/ KNHC	TCEEP/1-5/
Central Pacific	WTPA/51-55/ PHFO	TCECP/1-5/
western North Pacific	WTPQ/51-55/ PGUM	TCEPQ/1-5/

PRODUCT TITLE	WMO HEADER	AWIPS PRODUCT IDENTIFIER (NNNXXX)
Tropical Cyclone Position and Intensity from Satellite Data		
NW Pacific	TPPN10 PGTW	N/A
SW Pacific	TPPS10 PGTW	N/A
S central Pacific 120W-160E	TXPS40 PHFO	TCSSP
N central Pacific 140W-180	TXPN40 PHFO	TCSCP
N Indian Ocean	TPIO10 PGTW	N/A
S Indian Ocean	TPXS10 PGTW	N/A
Tropical Cyclone Formation Alert Message		
Issued by JTWC		
Northwest Pacific	WTPN/21-25/PGTW	N/A
Southwest Pacific	WTPS/21-25/ PGTW	N/A
North Indian Ocean	WTIO/21-25/ PGTW	N/A
South Indian Ocean	WTXS/21-25/ PGTW	N/A
Issued by NAVPACMETOCCEN		
Southeast Pacific	WTPS/21-25/ PHNC	N/A
Tropical Cyclone Update		
Atlantic Basin	WTNT/61-65/ KNHC	TCUAT/1-5/
Eastern Pacific	WTPZ/61-65/ KNHC	TCUEP/1-5/
Central Pacific	WTPA/61-65/ PHFO	TCUCP/1-5/
Tropical Cyclone Warnings		
Northwest Pacific	WTPN/31-35/ PGTW	TCPWP/1-5/
Southwest Pacific	WTPS/31-35/ PGTW	N/A
North Indian Ocean	WTIO/31-35/ PGTW	N/A
South Indian Ocean	WTXS/31-35/ PGTW	N/A
Tropical Weather Summary		
Atlantic Basin	ABNT30 KNHC	TWSAT
Eastern Pacific	ABPZ30 KNHC	TWSEP
Central Pacific	ACPN60 PHFO	TWSCP
Satellite Interpretation Message		
Hawaiian Islands	ATHW40 PHFO	SIMHI
Western North Pacific (Guam)	ATPQ40 PGUM	SIMGUM

PRODUCT TITLE	WMO HEADER	AWIPS PRODUCT IDENTIFIER (NNNXXX)
Satellite-Derived Rainfall		
Eastern Caribbean	TCCA21 KNHC	STDECA
Central Caribbean	TCCA22 KNHC	STDCCA
Western Caribbean	TCCA23 KNHC	STDWCA
Aircraft Reconnaissance Messages Reports-Atlantic Basin		
Reco Observation non-tropical (NHC)	URNT10 KNHC	REPNT0
Reco Observation non-tropical (DOD)	URNT10 KBIX	REPNT0
Reco Obs. non-tropical (NOAA/AOC)	URNT10 KWBC	
Reco Observation (NHC)	URNT11 KNHC	REPNT1
Reco Observation (DOD)	URNT11 KBIX	REPNT1
Reco Observation (NOAA/AOC)	URNT11 KWBC	
Vortex Data Message (NHC)	URNT12 KNHC	REPNT2
Vortex Data Message (DOD)	URNT12 KBIX	REPNT2
Vortex Data Message (NOAA/AOC)	URNT12 KWBC	
High Density Obs. (HDOB) (DOD)	URNT15 KNHC	AHONT1
High Density Obs. (HDOB)	URNT15 KBIX	AHONT1
High Density Obs. (HDOB) (NOAA/AOC)	URNT15 KWBC	
Dropsonde Report (NHC)	UZNT13 KNHC	REPNT3
Dropsonde Report (DOD)	UZNT13 KBIX	REPNT3
Dropsonde Report (NOAA/AOC)	UZNT13 KWBC	
Airbourne Expendable Bathythermograph	SOVX81 KNHC	OCDXBT
MinObs	URNT40 KWBC	

PRODUCT TITLE	WMO HEADER	AWIPS PRODUCT IDENTIFIER (NNNXXX)
Aircraft Reconnaissance Messages- East and Central Pacific Basins		
Reco Observation non-tropical (NHC)	URPN10 KNHC	REPPN0
Reco Observation non-tropical (DOD)	URPN10 KBIX	REPPN0
Reco Obs. non-tropical (NOAA/AOC)	URPN10 KWBC	
Reco Observation (NHC)	URPN11 KNHC	REPPN1
Reco Observation (DOD)	URPN11 KBIX	REPPN1
Reco Observation (NOAA/AOC)	URPN11 KWBC	
Vortex Data Message (NHC)	URPN12 KNHC	REPPN2
Vortex Data Message (DOD)	URPN12 KBIX	REPPN2
Vortex Data Message (NOAA/AOC)	URPN12 KWBC	
High Density Obs. (HDOB) (NHC)	URPN15 KNHC	AHOPN1
High Density Obs. (HDOB) (DOD)	URPN15 KBIX	AHOPN1
High Density Obs. (HDOB) (NOAA/AOC)	URPN15 KWBC	
Dropsonde Report (NHC)	UZPN13 KNHC	REPPN3
Dropsonde Report (DOD)	UZPN13 KBIX	REPPN3
Dropsonde Report (NOAA/AOC)	UZPN13 KWBC	
Aircraft Reconnaissance Messages- West Pacific Basins		
Reco Observation non-tropical (NHC)	URPA10 KNHC	REPPA0
Reco Observation non-tropical (DOD)	URPA10 KBIX/PGUA	REPPA0
Reco Obs. Non-tropical (NOAA/AOC)	URPA10 KWBC	
Reco Observation (NHC)	URPA11 KNHC	REPPA1
Reco Observation (DOD)	URPA11 KBIX/PGUA	REPPA1
Reco Observation (NOAA/AOC)	URPA11 KWBC	
Vortex Data Message (NHC)	URPA12 KNHC	REPPA2
Vortex data message (DOD)	URPA12 KBIX/PGUA	REPPA2
Vortex Data Message (NOAA/AOC)	URPA12 KWBC	
High Density Obs. (HDOB) (NHC)	URPA15 KNHC	AHOPA1
High Density Obs. (HDOB) (DOD)	URPA15 BKIX/PGUA	AHOPA1
High Density Obs. (HDOB) (NOAA/AOC)	URPA15 KWBC	
Dropsonde Report (NHC)	UZPA13 KNHC	REPPA3
Dropsonde Report (DOD)	UZPA13 KBIX/PGUA	REPPA3
Dropsonde Report (NOAA/AOC)	UZPA13 KWBC	
Summer/Winter Reconnaissance Schedule [Atlantic/Pacific])	NOUS42 KNHC	REPRPD

PRODUCT TITLE	WMO HEADER	AWIPS PRODUCT IDENTIFIER (NNNXXX)
Hurricane Local Statement		
Atlantic	WTUS/81-84/ KCCC	HLSNNN
San Juan	WWCA31 TJSJ	HLSSJU
San Juan (Spanish)	WWCA39 TJSJ	HLSSPN
Eastern Pacific	WTUS86 KCCC	HLSNNN
Central Pacific	WTHW80 PHFO	HLSHFO
(All Hawaiian Islands)		
western North Pacific		
(Guam)	WTPQ/81-85/ PGUM	HLSPQ/1-5/
South Pacific		
(Pago Pago, American Samoa)	WTZS/81-85/ NSTU	HLSZS/1-5/
Tropical Cyclone Objective Guidance Products		
Atlantic Basin	WHXX01 KMIA	CHGHUR
Pacific Basin	WHXX01 KWBC	CHGE77
Atlantic Basin	WHXX04 KWBC	CHGQLM
Aviation Tropical Cyclone Advisory Message		
Atlantic Basin	FKNT/21-25/ KNHC	TCANT/1-5/
East Pacific	FKPZ/21-25/ KNHC	TCAPZ/1-5/
Central Pacific	FKPA/21-25/ PHFO	TCAPA/1-5/
Tropical Cyclone Summary - Fixes		
South Central Pacific 120W - 160E	TXPS/41-45/ PHFO	TCSSP/1-5/
North Central Pacific 140W - 180	TXPN/41-45/ PHFO	TCSCP/1-5/

N/A indicates currently none assigned.**