## APPENDIX A

## LOCAL NATIONAL WEATHER SERVICE (NWS) OFFICE PRODUCTS

A.1.Hurricane/Typhoon Local Statements (HLS). WFOs with coastal county responsibilities and selected inland WFOs will issue these 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.
A.1.1. Mission Connection. 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.

## A.1.2. Issuance Guidelines.

A.1.2.1. Issuance Criteria. The following WFOs will issue HLSs when their area of responsibility is affected by a tropical cyclone watch/warning or evacuation orders. HLSs may also be issued as needed to dispel rumors or to clarify tropical cyclone related information for their CWA. Coastal WFOs have the option to include 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. Those are:

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

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

Western Region
San Diego, CA
Los Angeles/Oxnard, CA
Pacific Region
Honolulu, HI
Guam
WSO Pago Pago, American
Samoa

The inland WFOs listed below will also issue HLSs when hurricane or tropical storm force winds are expected to impact their area of responsibility. Other inland offices not issuing HLSs but expecting hurricane or tropical storm force winds may be required to issue Tropical Storm/Hurricane Wind Watches or Warnings.

Atlanta, GA
Austin/San Antonio, TX
Birmingham, AL
Fort Worth, TX
Huntsville, AL

Jackson, MS
Lubbock, TX
Midland, TX
San Angelo, TX
Shreveport, LA

## A.1.2.2. 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.
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.
A.1.2.3. Valid Time. HLSs are valid at time of issuance until a subsequent HLS is issued. HLSs are issued at least once every 6 hours
A.1.2.4. Product Expiration Time. Generally 6 hours after the issuance time and should coincide with the next expected update or when the event is forecast to end.
A.1.3. Technical Description. HLSs will follow the format and content described in this section.
A.1.3.1. Content. HLSs will add localized details to tropical cyclone center's advisory releases and should not conflict with or repeat advisory information not directly
applicable to the local office's CWA. Before the first HLS, use public information statements (PNS) to inform the public on routine hurricane preparedness information. The first HLS 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 center between advisories when appropriate. When tropical cyclones threaten the Samoas (American Samoa and Samoa), the two local offices will coordinate with Regional Specialized Meteorological Center (RSMC) Nadi, CPHC, and with each other to determine the best integrated and internally consistent forecast of conditions expected in the area.

Table A-1 below defines which products are issued via the normal suite of product headers during tropical cyclone watches/warnings and those products superseded by tropical cyclone watches/warnings and carried in a HLS.

Table A-1. HLS Product Table

| Product | Tropical Cyclone Watch/Warning |  |
| :---: | :---: | :---: |
|  | HLS | Stand-alone |
| Flash Flood Watch/Warning/Statement |  | X |
| Tornado Warning |  | X |
| Severe Thunderstorm Warning |  | $\mathrm{X}^{1}$ |
| Coastal Flood Watch (CFW)/Warning/Statement | $\mathrm{X}^{2}$ | $\mathrm{X}^{2}$ |
| Special Marine Warning (SMW) |  | $\mathrm{X}^{3}$ |
| Severe Weather Statement |  | $\mathrm{X}^{1}$ |
| Marine Weather Statement |  | $\mathrm{X}^{3}$ |
| Special Weather Statement | X |  |
| Surf Zone Forecast/Surf Forecast | X |  |
| High Surf Advisory/Warning issued by WFO Honolulu | X |  |

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

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

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.

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 A-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.

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

| INITIAL WFO PRODUCT <br> IN EFFECT | SUBSEQUENTLY- <br> ISSUED TROPICAL <br> CYCLONE (TC) | CONTINUE <br> CFW | CANCEL <br> CFW |
| :--- | :--- | :---: | :---: |
| Coastal Flood Advisory | TC WATCH | X |  |
| Coastal Flood Advisory | TC WARNING | x |  |
| Coastal Flood WATCH (CFW) | TC WATCH/WARNING | x | x |
| Coastal Flood WARNING (CFW) | TC WATCH | x | x |
| Coastal Flood WARNING (CFW) | TC WARNING | x |  |
| High Surf ADVISORY (CFW) | TC WATCH | x |  |
| High Surf ADVISORY (CFW) <br> High Surf WARNING (CFW) <br> $<$ Pacific, Western Region only> <br> TC WARNING <br> (Pacific, Western Region only) TC WATCH | xARNING |  |  |

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.
A.1.3.2. Format. As appropriate, the product header options are: "Hurricane or Typhoon Local Statement;" "Tropical Storm Local Statement;" "Tropical Depression Local Statement;" "Subtropical Storm Local Statement;" or "Subtropical Depression Local Statement." The HLSs overview headline and overview is optional. If used, placing the storm information in
the overview might help decrease length of the HLS so that it does not have to be repeated in each segment.

The number of segments will vary depending upon 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.

Some private sector vendors are parsing and scrolling HLS section information. Format consistency: ellipses, carriage returns and the exact section headline wording of the HLS information is required. After the headline(s), the first section will always be the NEW INFORMATION section except for the first issuance of the HLS. Subsequent section headlines should be arranged with the most important first. WFOs retain the option to use a non-specific section headline which is not already covered by the other sectional topics. With the exception of the New Information section, any section may be omitted if it is not appropriate for a given situation.

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

## ...Headline(s)...

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

Section headers in bold must be written exactly as noted:

## ...New Information...

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

## ...Areas Affected...

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

## ...Watches/Warnings...

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

## ...Storm Information...

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

## ...Precautionary/Preparedness Actions...

Short-term precautionary actions and times they should be completed. This includes any evacuation recommendations as provided or stated by state and/or local authorities. Listing these actions is particularly important once a tropical cyclone watch or warning is announced.
...Storm Surge and Storm Tide...
Storm surge and storm tide (storm surge plus astronomical tide) information, including times various heights are expected, present heights, and their locations. If data exists, a comparison of storm surge heights from previous tropical cyclones should be included. Storm surge information should be forecast as a range (i.e. 18-22 feet with locally higher values to 25 feet) and must agree with tropical cyclone center forecasts as included in the advisories. Include storm tide information because local officials might not have access to tide tables. Reference storm tide forecasts to appropriate datums understood by local authorities. For many portions of the coast, this would be mean sea level although some areas use mean lower low water.

## ...Winds...

Expected time of onset of tropical storm/hurricane/typhoon force winds. (Use the tropical cyclone forecast/advisory as guidance.) WFOs may provide information about the local impacts of the expected winds. Give timing of impacts in ranges or general terms such as "afternoon," "evening," and so on.

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

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

## ...Inland Flooding...

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

## ...Next Update...

Time of next or final statement.

## Example:

This example is for illustrative purposes only and the geographical/meteorological representations may not be accurate.

WTUS82 KTBW 251748
HLSTBW
URGENT - IMMEDIATE BROADCAST REQUESTED
HURRICANE FOX LOCAL STATEMENT
NATIONAL WEATHER SERVICE TAMPA BAY RUSKIN FL
148 PM EDT TUE SEP 252007
...OVERVIEW HEADLINE... (optional)
.OVERVIEW (optional)
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 252007
...HURRICANE WARNING IN EFFECT...
...NEW INFORMATION..
(TEXT)
...AREAS AFFECTED...
(TEXT)
ETC...
...NEXT UPDATE...
(TEXT)
\$\$
FLZ039-042-048-049-260000-
/O.NEW.KTBW.HU.W.1006.070925T1748Z-000000T0000Z/
LEVY-CITRUS-HERNANDO-PASCO-
148 PM EDT TUE SEP 252007
...HURRICANE WARNING IN EFFECT...
...NEW INFORMATION...
(TEXT)
...AREAS AFFECTED...
(TEXT)
ETC...
...NEXT UPDATE...
(TEXT)

## \$\$

FLZ043-260000-
/O.NEW.KTBW.TI.W.0002.070925T1748Z-070926T0000Z/
SUMTER-
148 PM EDT TUE SEP 252007
...TROPICAL STORM WIND WARNING IN EFFECT UNTIL 8 PM EDT THIS EVENING...
...NEW INFORMATION...
(TEXT)
...AREAS AFFECTED...
(TEXT)
ETC...
...NEXT UPDATE...
(TEXT)
\$\$

```
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)
.<Overview> (optional)
stZ001-005>015 (or marine GMZxxx-xxx) ddhhmm-
/.kaaa.cccc.pp.ss####.yymmddThhnnZ-yymmddThhnnZ/ (P-VTEC line)
Zone-zone-zone-
Time am/pm time_zone day mon dd yyyy
...HEADLINE...
...New Information...
...Areas Affected...
...Watches/Warnings...
...Storm Information...
...Precautionary/Preparedness Actions...
...Storm Surge and Storm Tide...
...Winds...
...Inland Flooding...
...Probability of Hurricane/Tropical Storm Conditions...
...Tornadoes...
...(Non-specific section header-Substitute appropriate header)...
...Next Update...
$$
```

Figure A-1. Hurricane Local Statement Format
A.1.4. Relationship of HLSs to the NOW (i.e., Short Term Forecast-NOWcast). The NOW is a stand-alone product focused on conditions impacting the office's CWA for the next 0 to 6 hours. It will complement the HLS by providing critical storm information in the first eight lines.
A.2.Extreme Wind Warning (EWW). Short duration warnings are issued by WFOs to protect lives and property. WFO forecasters issue short duration EWW products to provide the public
with advance notice of the onset of extreme tropical cyclone winds, usually associated with the eyewall of a major (category 3 or higher) tropical cyclone. Extreme Wind Warnings inform the public of the need to take immediate shelter in an interior portion of a well-built structure due to the onset of extreme tropical cyclone winds.

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

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

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

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

```
WFUS5i cccc ddhhmm
EWWccc
STC001-002-ddhhmm-
/k.aaa.cccc.pp.s.####.yymmddThhnnZB-yymmddThhnnZE/
BULLETIN - EAS ACTIVATION REQUESTED
EXTREME WIND WARNING
NATIONAL WEATHER SERVICE city state
time am/pm time_zone day of the week month dd yyyy
THE NATIONAL WEATHER SERVICE IN city HAS ISSUED AN
* EXTREME WIND WARNING FOR THE ONSET OF SUSTAINED WINDS OF 115 MPH
    OR GREATER FOR...
    county one in section state (List warned counties)
    county two in section state (# Counties will match # counties in UGC Line)
    IN ASSOCIATION WITH (Phenomenon/The Event)
* UNTIL hhmm am/pm time_zone (Expiration time of warning)
* AT hhmm am/pm time_zone...(Warning basis statement and forecast impacts)
* THESE EXTREME WINDS WILL AFFECT... (Pathcast Version)
    location #1 AROUND hhmm am/pm time_zone...
    location #2 AROUND hhmm am/pm time_zone...
OR
    LOCATIONS IMPACTED INCLUDE... (Pathcast Version w/o time)
    location #1...
    location #2...
    (Impact Locations are mandatory, either pathcast or no pathcast version listed above)
CALL TO ACTION
LAT...LON (Mandatory list of latitude/longitude points outlining the forecaster-drawn area of
greatest impact)
$$
FORECASTER NAME/NUMBER (OPTIONAL)
```

FIGURE A-2. Extreme Wind Warning
A.3.Post-Tropical Cyclone Reports (PSH). All WFOs issuing HLSs will prepare post-storm reports. Inland offices issuing inland tropical storm/hurricane wind watches or warnings will also submit reports. Other offices whose CWA=s experienced wind gusts greater than 33 knots, flooding, tornadoes, damage, or casualties will also submit reports. A standardized format has been introduced for easier post-processing of the data by end users.
A.3.1. Mission Connection. The PSH product is intended to provide the NHC, NWS Headquarters, the media, the public, and emergency management officials with a record of peak tropical cyclone conditions. This data is then used to formulate other post-event reports, news articles and historical records.

## A.3.2. Issuance Guidelines.

A.3.2.1. Issuance Criteria. If HLSs are issued, a PSH will be issued.
A.3.2.2. Issuance Times. Transmit the reports within 5 days following the transmission of the last HLS or inland tropical storm/hurricane wind watches or warnings. Amend reports as needed.

## A.3.3. Technical Description.

A.3.3.1. Content. Include the following items in the initial report and in any subsequent updated reports:
a. Wind data: If the observed peak gusts are greater than 33 knots, report highest sustained surface wind speed (knots) and duration (1-, 2- 8-, or 10-minute average which ever applies), peak gust (knots), and date/times of occurrence in UTC. Specify anemometer height (meters) if other than 10 meters. Report all land-based NOAA, Department of Defense, and Federal Aviation Administration official observing sites (ASOS/AWOS) in the OFFICIAL OBSERVATIONS portion of section A. Report other reliable land-based data collected by government sources or other institutions in the UNOFFICIAL OBSERVATIONS portion of section A. These include reports from stations maintained by the U. S. Coast Guard; state, county, and local governments; universities; private companies; and experimental networks. Report NOAA buoy/Coastal Marine Automated Network (C-MAN) stations, National Ocean Service stations, and trusted private or university observations in, or near, a WFO's marine warning area, in section b. Also list adjusted speeds corrected for instrument type and speed range if known. Data reports from the public are optional. However, NWS offices should encourage these data and include them in the PSH when considered reliable.
b. Pressure data: Report lowest sea level pressure (millibars), and date/time of occurrence (UTC). Report data from all sources given in the wind data section and other stations where significant pressure observations are available. Report pressures less than 1005 mb , with pressure greater than 1005 mb reported as needed or as requested.
c. Storm total rainfall: Report amount (inches) and duration (dates). Report data from all sources given in Section a, and other stations where significant rainfall observations are available. Report storm total rainfalls of 3 inches or more, with amounts less than 3 inches reported as needed or as requested.
d. Inland flooding: Report to include date/times (UTC) and counties/parishes/independent cities of occurrence, along with a brief worded summary, as appropriate.
e. Maximum storm surge and storm tide: Reference storm tide to appropriate datums understood by local authorities. For many portions of the coast, this would be National Geodetic Vertical Datum although some areas use mean lower low water. Report storm tide in feet above the datum, and storm surge/wind waves in feet above the normal, predicted (astronomical) tide level. Identify location and date/time (UTC) of occurrence where possible. Report tides of 1 foot or greater above normal, with tides of less than 1 foot above normal reported as needed or as requested. Report extent of beach erosion as appropriate.
f. Tornadoes: Report times (UTC) and locations, along with a brief description of damage, as appropriate. The reports may be taken from Local Storm Reports (LSR) issued for the event.
g. Storm impacts: Including deaths, injuries, dollar damages, number of people evacuated, etc., per county/parish/independent city as reported by emergency management, trusted media sources, etc.

Please note: For land observations, marine observations, storm total rainfall, and tornadoes, latitude and longitude should be included. The AWIPS software will output the values, in the form xx.m (-)byy.n, where
$\mathrm{xx}=$ degrees north latitude
$\mathrm{m}=$ rounded decimal value for latitude, in tenths of a degree
$(-)=$ negative, or west, longitude, as necessary
$\mathrm{b}=100$ 's place, if needed
yy $=$ degrees longitude, zero to 99
$n=$ rounded decimal value for longitude, in tenths of a degree

```
ACUS72 Kccc ddhhmm
PSHxxx
POST TROPICAL CYCLONE REPORT...(TROPICAL CYCLONE TYPE) (NAME)
NATIONAL WEATHER SERVICE CITY STATE
Time am/om time_zone day of week mon dd yyyy
TEXT (see paragraph A. }10\mathrm{ for specific details)
$$
```

Figure A-3. Post-Tropical Cyclone Report Format
A.4.Information for Service Assessments. WFOs will forward a copy of media reports, especially newspaper clippings (online and printed) representative of the event and its impacts. Send reports to the appropriate RH and TPC within 7 days following the issuance of the last product concerning the storm. Reports do not have to include all interviews or radio or television spots concerning the landfall event in each local office's CWA.
A. 5 Local Storm Reports (LSR). WFOs will prepare these reports in accordance with LSR instructions (reference NWS Instruction 10-517, available at http://nws.noaa.gov/directives).
A.6.Storm Reports. WFOs will prepare these reports in accordance with Storm Data Preparation instruction (Reference NWS Instruction 10-1605).
A.7.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 162002
CORRECTED FOR (GIVE REASON)

## TEXT FOLLOWS....

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

## A.8. Procedures for Populating WFO-Generated Wind Forecast Grids for Tropical Cyclone

Events. The following are short-term solutions to be followed by all impacted WFOs for populating WFO wind grids for tropical cyclones. Updates to this directive will take place as better methods for populating WFO-generated wind forecasts are integrated into the Interactive

## Forecast Preparation System.

## A.8.1. Wind Speed Values Within the 34 kt Wind Radii

## 0-24 hours

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

## 25-72 hours

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

## 73-120 hours

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

## 121-168 hours

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

## A.8.2. Wind Speed Values Outside the 34 kt Wind Radii

## 0-120 hours

Use deterministic wind speed values.

## A.8.3. Wind Direction Values Inside or Outside the 34 kt Wind Radii

## 0-168 hours

Use deterministic wind direction values.
A.8.4. Wind Gust Values Inside or Outside the 34 kt Wind Radii. At this time, there is no requirement to produce a gust grids. As an option, if a WFO desires to produce a gust grid it will have to be created with little or no guidance.
A.8.5. Caveat. It is highly recommended the following caveat be placed on all text and graphical products..."Winds in and near tropical cyclones should be used with caution due to uncertainty in forecast track, size, and intensity."

## A.9. Product Examples.

## 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.

WTUS82 KTBW 252348
HLSTBW
URGENT - IMMEDIATE BROADCAST REQUESTED
HURRICANE FOX LOCAL STATEMENT
NATIONAL WEATHER SERVICE TAMPA BAY RUSKIN FL
748 PM EDT TUE SEP 252007
...HURRICANE FOX MOVES CLOSER TO THE UPPER WEST COAST...
.AT 7 PM EDT HURRICANE FOX WAS LOCATED 130 MILES WESTSOUTHWEST OF TAMPA BAY/ST PETERSBURG FLORIDA MOVING NORTHEAST AT 9 MPH. HURRICANE FOX IS A CATEGORY TWO STORM AND COULD BECOME A CATEGORY THREE BEFORE LANDFALL. HURRICANE WARNINGS ARE IN EFFECT FOR THE NORTH CENTRAL FLORIDA GULF COAST. HURRICANE WIND WARNINGS ARE NOW IN EFFECT FOR INLAND AREAS OF NORTH CENTRAL FLORIDA.

GMZ850-870-260600-
/O.CON.KTBW.HU.W.0002.000000T0000Z-000000T0000Z/
TARPON SPRINGS TO SUWANNEE RIVER OUT 20 NM-
TARPON SPRINGS TO SUWANNEE RIVER OUT 20 TO 60 NM748 PM EDT TUE SEP 252007
...HURRICANE WARNING REMAINS IN EFFECT...
...NEW INFORMATION...
HURRICANE FOX GAINS STRENGTH BUT REMAINS A CATEGORY TWO HURRICANE.
...WATCHES/WARNINGS...
A HURRICANE WARNING IS IN EFFECT FOR THE COASTAL WATERS FROM TARPON SPRINGS TO SUWANNEE RIVER OUT 60 NAUTICAL MILES.
...WINDS...
WINDS ARE CURRENTLY SOUTH TO SOUTHWEST AT 50 MPH WITH GUSTS TO 75 MPH. HURRICANE FORCE WINDS OF 95 TO 110 MPH WITH GUSTS TO 130 MPH WILL OCCUR TONIGHT.
...PRECAUTIONARY/PREPAREDNESS ACTIONS...
RECREATIONAL BOATERS SHOULD REMAIN IN PORT. COMMERCIAL VESSELS SHOULD PREPARE FOR VERY STRONG WINDS AND DANGEROUS SEA CONDITIONS...AND CONSIDER REMAINING IN PORT OR TAKING SHELTER IN PORT UNTIL WINDS AND WAVES SUBSIDE.
...NEXT UPDATE...
THE NEXT UPDATE WILL BE ISSUED BY 2 AM EDT OR SOONER IF CONDITIONS WARRANT.

## \$\$

FLZ039-042-048-049-260600-
/O.CON.KTBW.HU.W.1006.000000T0000Z-000000T0000Z/
LEVY-CITRUS-HERNANDO-PASCO-
748 PM EDT TUE SEP 252007
...HURRICANE WARNING IN EFFECT...
...NEW INFORMATION...
HURRICANE FOX GAINS STRENGTH BUT REMAINS A CATEGORY TWO HURRICANE.
...PRECAUTIONARY/PREPAREDNESS ACTIONS...
ALL PRECAUTIONS SHOULD BE COMPLETED. THOSE COASTAL RESIDENCES NOT HAVING EVACUATED SHOULD GO TO A SHELTER OF LAST RESORT.
...WINDS...
WINDS ARE CURRENTLY SOUTH TO SOUTHWEST AT 50 MPH WITH GUSTS TO 75 MPH. HURRICANE FORCE WINDS OF 95 TO 110 MPH WITH GUSTS TO 130 MPH WILL OCCUR TONIGHT.
...NEXT UPDATE...
THE NEXT UPDATE WILL BE ISSUED BY 2 AM EDT OR SOONER IF CONDITIONS WARRANT.

## \$\$

FLZ043-260600-
/O.UPG.KTBW.TI.W.0002.000000T0000Z-070926T1000Z/
/O.NEW.KTBW.HI.W.0001.070925T2348Z-070926T1000Z/
SUMTER-
748 PM EDT TUE SEP 252007
...HURRICANE WIND WARNING IN EFFECT UNTIL 6 AM EDT WEDNESDAY...
...NEW INFORMATION...
A HURRICANE WIND WARNING NOW IN EFFECT FOR SUMTER COUNTY AS HURRICANE FOX MOVES TOWARD THE WEST COAST.
...PRECAUTIONARY/PREPAREDNESS ACTIONS...
ALL PREPAREDNESS ACTIONS SHOULD BE COMPLETED. THOSE IN MOBILE HOMES THAT ARE NOT BUILT TO THE LATEST WIND CODES SHOULD IMMEDIATELY SEEK REFUGE IN AN OFFICIAL EVACUATION SHELTERS.
...WINDS...
TROPICAL STORM FORCE WINDS ARE MOVING INTO THE AREA WITH NOBLETON REPORTING WINDS OF 40 MPH AND GUSTS TO 55 MPH . WINDS WILL INCREASE THIS EVENING WITH SUSTAINED WINDS OF 75 MPH EXPECTED BY MIDNIGHT AND GUSTS TO 95 MPH.
...NEXT UPDATE...
THE NEXT UPDATE WILL BE ISSUED BY 2 AM EDT OR SOONER IF CONDITIONS WARRANT.

## \$\$

## EXAMPLE: SHORT TERM FORECAST (NOWcast)

FPUS71 KMOB 192130
NOWMOB
SHORT TERM FORECAST
NATIONAL WEATHER SERVICE MOBILE AL 0430 PM CDT SAT AUG 191995

ALZ051>064-MSZ067-075-076-078-079-192330-
BALDWIN-MOBILE-HANCOCK-HARRISON-JACKSON
.NOW...
...HURRICANE GARY WILL MOVE ACROSS BALDWIN AND MOBILE COUNTIES BY 530 PM...

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

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

## EXAMPLE: EXTREME WIND WARNING (EWW)

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 132004
THE NATIONAL WEATHER SERVICE IN RUSKIN HAS ISSUED AN

* EXTREME WIND WARNING FOR THE ONSET OF SUSTAINED WINDS OF 115 MPH OR GREATER FOR...
CHARLOTTE COUNTY IN SOUTHWEST FLORIDA LEE COUNTY IN SOUTHWEST FLORIDA
* UNTIL 500 PM EDT
* AT 335 PM EDT...SURFACE OBSERVATIONS AND NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED EXTREME WINDS...ASSOCIATED WITH THE EYEWALL OF HURRICANE CHARLEY...WERE MOVING ONSHORE NEAR NORTH CAPTIVA ISLAND. SUSTAINED WINDS IN EXCESS OF 140 MPH...CAPABLE OF PRODUCING WIDESPREAD DESTRUCTION...CAN BE EXPECTED AS THE EYEWALL PASSES OVERHEAD. MOVEMENT WAS NORTH NORTHEAST AT 20 MPH.
* THESE EXTREME WINDS WILL AFFECT...

ST. JAMES CITY BY 345 PM
BOKEELIA BY 350 PM
PUNTA GORDA BY 400 PM

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

LAT...LON 26728226264482132702817427028207
TIME...MOT...LOC 1935 200DEG 17KT 26658210
\$ $\$$

# EXAMPLE: POST-TROPICAL CYCLONE REPORT 

## ACUS72 KTBW

PSHTBW
POST TROPICAL CYCLONE REPORT...TROPICAL STORM ALBERTO NATIONAL WEATHER SERVICE TAMPA BAY AREA - RUSKIN FL 900 PM EDT TUE JUN 132006

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 H | HAVEN |  |  |  |  |  |
| 28.0-81.7 | 1009.1 | 13/0640 | 220/023 | 13/1706 | 220/030 | 13/1705 |

KTPA-TAMPA INTERNATIONAL
$\begin{array}{llllllllllll}28.0 & -82.5 & 1007.8 & 13 / 0931 & 200 / 029 & 13 / 0509 & \text { I } 220 / 039 & 13 / 0707 & \text { I }\end{array}$
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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B. MARINE OBSERVATIONS...
NOTE: ANEMOMETER HEIGHT IN METERS AND WIND AVERAGING PERIOD IN
MINUTES INDICATED UNDER MAXIMUM SUSTAINED WIND IF KNOWN
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline LOCATION ID & MIN & DATE/ & MAX & DATE/ & PEAK & DATE/ \\
\hline LAT LON & PRES & TIME & SUST & TIME & GUST & TIME \\
\hline DEG DECIMAL & (MB) & (UTC) & (KT) & (UTC) & (KT) & (UTC) \\
\hline
\end{tabular}
4 2 0 3 6 ~ 1 0 0 ~ N M ~ W E S T ~ O F ~ B A Y P O R T
28.5 -84.5 1008.5 13/0905 280/035 13/1040 080/045 12/1050
4 2 0 1 3 ~ 3 0 ~ N M ~ W E S T ~ O F ~ V E N I C E ~
25.9 -85.9 1003.7 13/1040 170/029 12/2210 200/035 13/0310 I
4 2 0 0 3 2 1 0 ~ N M ~ W ~ O F ~ C A P T I V A ~ I S L A N D ~
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\mathrm{ UTC JUNE 13
    2006
\begin{tabular}{|c|c|c|c|}
\hline CITY/TOWN & COUNTY & ID & RAINFALL \\
\hline LAT LON & & & ( IN ) \\
\hline DEG DECIMAL & & & \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|}
\hline SUWANNEE & LEVY & SUWF1 & 4.23 \\
\hline \multicolumn{4}{|l|}{29.2-83.1} \\
\hline \multicolumn{4}{|l|}{\multirow[t]{2}{*}{\begin{tabular}{llll} 
CHIEFLAND & LEVY & CHIF1 67 \\
\(29.5-82.9\) & &
\end{tabular}}} \\
\hline & & & \\
\hline \multicolumn{4}{|l|}{\multirow[t]{2}{*}{\begin{tabular}{llll} 
WILLISTON & LEVY & WLSF1 53 \\
\(29.4-82.5\) & &
\end{tabular}}} \\
\hline & & & \\
\hline \multicolumn{4}{|l|}{\multirow[t]{2}{*}{\begin{tabular}{llll} 
THE VILLAGES & SUMTER & KVVG 87 \\
\(28.9-81.9\) & &
\end{tabular}}} \\
\hline & & & \\
\hline \multicolumn{4}{|l|}{\multirow[t]{2}{*}{\begin{tabular}{lcrl} 
DADE CITY & PASCO & STLF1 62
\end{tabular}}} \\
\hline & & & \\
\hline \multicolumn{4}{|l|}{\multirow[t]{2}{*}{\begin{tabular}{llll} 
PINELLAS PARK & PINELLAS & PINPK & 4.10 \\
\(27.9-82.7\) & &
\end{tabular}}} \\
\hline & & & \\
\hline
\end{tabular}
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"
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| COUNTY |  | CITY/TOWN OR LOCATION | $\begin{aligned} & \text { SURGE } \\ & \text { (FT) } \end{aligned}$ | $\begin{aligned} & \text { TIDE } \\ & \text { (FT) } \end{aligned}$ | DATE <br> TIME | $\begin{aligned} & \text { BEACH } \\ & \text { EROSION } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LEVY | G | CEDAR KEY | 4.09 | 6.74 | 13/0800 | MINOR |
| PINELLAS | G | CLEARWATER | 2.42 | 4.02 | 13/0900 | MINOR |
| MANATEE |  | QQUINA 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 | COUNTY | DATE/ | EF SCALE |
| :---: | :---: | :---: | :---: |
| LAT LON(DEG DECIMAL) |  | TIME(UGC) | (IF KNOWN) |
| DESCRIPTION |  |  |  |
| 3 NE WAUCHULA | HARDEE | 12/0650 | EF0 |
| 27.6 -81.8 |  |  |  |
| 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 |  |
| :--- | :--- | :--- | :--- |

TORNADO OBSERVED 1 MILE SOUTH OF ARCADIA.
REMARKS: NONE.
G. STORM IMPACTS BY COUNTY..


FORT ISLAND TRAIL WAS COVERED WITH 4 FEET OF WATER.


