

**NATIONAL WEATHER SERVICE INSTRUCTION 10-503
NOVEMBER 10, 2009**

Operations and Services

Public Weather Services, NWSPD 10-5

WFO PUBLIC WEATHER FORECAST PRODUCTS SPECIFICATION

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

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SUMMARY OF REVISIONS: This directive supersedes NWSI 10-503, “WFO Public Weather Forecast Products Specification,” dated December 19, 2005. Changes are listed below. Note: bold type parenthetic expressions indicate the best time estimates for the specified software modifications.

- Removed duplicated product specifications and format definitions from 10-503 that are now contained within NWSI 10-204, *Derived Forecast Text Products Specifications*. Links are provided to these products from within 10-503.
- Updated Area Forecast Discussion (AFD) examples in Appendix A.
- Page 6 - section 2.3.4 b – Exclusions wording updated
- Removed the Time Period in the AFD Aviation example in Appendix A.
- Removed the Surf Zone Forecast in Appendix A.
- Change in focal point for Office of Primary Responsibility
- Change in Office Director, OCWWS

signed

10/29/09

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Date

WFO Public Weather Forecast Products Specification

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1. **Introduction.** This procedural directive provides product specifications for the Area Forecast Discussion (AFD) public product issued by the National Weather Service (NWS) Weather Forecast Offices (WFOs). Specifications include the guidelines associated with this product, detailed content, and format for the product type. Duplicated product specifications and format definitions from NWSI 10-503 are currently contained in NWSI 10-204, *Derived Forecast Text Products Specifications*. Links are provided to these products from within NWSI 10-503. The NWS is continuing to transition from providing weather forecast and warning information primarily via scheduled text products, to providing more detailed information derived from a digital forecast database. Digital forecast products dictated by events may be in the form of text, tabular, or graphics. While most products described or referenced in this instruction are prepared by automated formatters extracting information from a digital forecast database, others are created using a mixture of manual preparation and product formatters.

2. **Area Forecast Discussion (product category AFD).**

2.1 **Mission Connection.** The Area Forecast Discussion (AFD) is a semi-technical product primarily used as a means to explain the scientific rationale behind a forecast and summarize watches, warnings and/or advisories in effect. This highly visible product is used to convey forecast and watch/warning/advisory information primarily to federal agencies, weather sensitive officials, and the media. The AFD is also useful for coordination among WFOs and River Forecast Centers, National Centers, and CWSUs. The forecast insight provided in the AFD is beyond that which can be found in other NWS products.

2.2 **Issuance Guidelines.**

2.2.1 **Creation Software.** The AFD should be composed using the Advanced Weather Interactive Processing System (AWIPS) Interactive Forecast Preparation System (IFPS) preformatted AFD shell, or other text editor if IFPS is unavailable.

2.2.2 **Issuance Criteria.** The AFD is issued at least twice a day by all WFOs in accordance with the mandatory Zone Forecast Product (ZFP) issuances. If applicable, additional AFDs should be issued to provide reasoning for forecast updates or to provide an explanation of rapidly-evolving mesoscale trends.

2.2.3 **Issuance Time.** WFOs should issue AFDs within the 2-hour period preceding or 1-hour period following the release of the ZFP. AFDs should be issued within 1-hour prior to, or after updated forecast packages.

2.2.4 **Valid Time.** AFDs are valid from time of release until the next complete update.

2.2.5 **Product Expiration Time.** AFDs do not contain a product expiration time.

2.3 **Technical Description.** AFDs should follow the format and content described in the following section.

2.3.1 Universal Geographic Code (UGC) Type. There is no UGC coding associated with the AFD product.

2.3.2 MND Broadcast Instruction Line. There is no MND Broadcast Instruction Line associated with this product.

2.3.3 MND Product Type Line. All WFOs will use the AFD MND header, "AREA FORECAST DISCUSSION."

2.3.4 Content. The AFD consists of two primary sections: (1) a narrative description of forecast information and reasoning, and (2) a summary of public, marine and fire weather outlook/watch/ warning/advisory issuances. The discussions should focus on the most significant weather issues affecting a WFO's geographic area of responsibility during the seven day forecast period. Emphasis should be placed on those forecast periods where outlooks/watches/warnings/advisories are in effect, proposed, or are being considered. The narrative content of this product should be professional and remain focused on the meteorology. Editorial comments are inappropriate.

a. Narrative Discussion. The narrative discussion is a concise explanation of forecast reasoning and should express the deliberations made by the WFO forecast team, as well as consensus decisions with adjacent offices, River Forecast Centers, and National Centers. Use of data sources, such as the WSR-88D, ASOS, Profiler, satellite, local and national models, and local and national analysis are encouraged. The discussion should emphasize significant aspects of the forecast such as:

- (1) Identification of the most significant hydrometeorological weather affecting the geographical area of responsibility during the 7 Day forecast period;
- (2) Identification of the forecast problem(s)-of-the-day and explanation of their solution (s);
- (3) An indication of forecast team confidence and probabilistic guidance on weather possibilities not found in other products;
- (4) Reasoning behind watch/warning/advisory issuance;
- (5) Differences in model guidance and an indication as to which model appears the most correct and why;
- (6) Reasoning for varying significantly from automated model output products;
- (7) Reasons for significant changes from the previous forecast;

guidance

- (8) Expected timing of events such as beginning or ending of precipitation and degree of uncertainty;
 - (9) A brief review of the synoptic situation.
- b. Watch/Warning/Advisory Block. The Watch/Warning/Advisory Block (see Appendix A, section 1 for an example) is used to summarize public, fire weather and marine long duration hazardous weather contained in the associated forecast package. Include the watch/warning/advisory block in all AFDs in a separate section after the narrative discussion.
- (1) Hurricanes and Tropical Storms. WFOs will also include watches and warnings for hurricanes and tropical storms affecting their geographic area of responsibility.
 - (2) Exclusions. WFOs should not list short duration warnings (of a few hours or less) for convective and flood events; including severe thunderstorm, tornado watches and warnings, and flash flood and flood warnings.

No formal coding schemes for the watch/warning/advisory block are required, but formal coding may be used in this section as produced by the IFPS process which extracts hazard information from the digital database. The areas affected may be described geographically and/or by forecast zones. Well known contractions are permitted in this section. If zones are not referenced, the geographical description should be detailed enough to allow for an accurate interpretation of the referenced area. For example, instead of just "NRN," add a fraction or delineate with reference to station identifiers and/or prominent topographic features (such as "NRN QTR" or "NRN MO N OF MO RVR"). If topographic features are used without zone references, their approximate location within the state should be given. An example without zones would be "MT SHASTA SISKIYOU AREA OF XTRM NRN CA."

When no public and marine watch/warning/advisory information is needed, use the word "NONE."

- c. Preliminary Point Temperatures and POPs. At regional discretion, the forecaster may include preliminary point forecasts of temperatures and/or probability of precipitation for key locations following the narrative (see section 9.3.4 for specific format).
- d. Use of Contractions. AFDs should be composed in plain language using complete words. Limited use of contractions is permitted (e.g., to avoid repetition of lengthy terms, or to allow forecasters to save time by expressing their thoughts more concisely) under the following two circumstances:

- (1) All contractions will come from the United States Aeronautical Contractions Handbook 7340.1[x], where “x” is the most recent version. NWS contractions should be used as a first choice. If an NWS contraction cannot be found for a particular term, a contraction from other sources within the handbook is permitted (see Appendix D).

and,

- (2) Contractions should be well-known by the user community (e.g., PAC NW for Pacific Northwest, TSTMS for thunderstorms, etc.).

2.3.5 Format. The AFD is a single segment narrative product. At a minimum, a mandatory discussion identifier is used to organize the narrative discussion. Various other topic dividers may be used to organize, clarify, and allow for automatic retrieval of information from the product. When these optional section identifiers are used, they must be entered exactly as shown below --using the same spelling, beginning with a period (.), and followed by three periods (...). The information that follows may either be on the same line or on subsequent lines (See Figure 1).

2.3.5.1 Narrative and Use of Topic Dividers. The narrative is primarily a free form text section. However, topic dividers are used to highlight the text which follows, and allow for automatic retrieval of program specific information. If used, there will be no deviation from exact spelling and format. Each topic will be followed by a double ampersand “&&” and a line feed to indicate the end of the section.

To begin the AFD narrative section, either use introductory topic divider format (a), or divider format (b) below (also See Figure 1).

- a. .DISCUSSION...
- or**
- b. .SHORT TERM [Time Period]... **and** .LONG TERM [Time Period]...
(used in conjunction with one another)

All other topic dividers are optional, and should be included as appropriate. The following is a comprehensive list of the topic dividers:

- .UPDATE...[Insert brief reason for forecast update. Provide additional details within .SHORT TERM/.LONG TERM or .DISCUSSION sections]
- .PREV DISCUSSION [HHMM]...[Append previous AFDs (or significant portions thereof. Do not include delimiters or the Watch/Warning/Advisory Blocks from the previous AFDs)]
- .SYNOPSIS...[Insert brief weather depiction & movement of systems]
- .MARINE.....[Insert marine weather /sea state information]
- .AVIATION...[Insert aviation weather/ceiling and visibility information]

- .FIRE WEATHER...[Insert fire weather information/low relative humidity, strong wind, dry lightning.]
- .HYDROLOGY...[Insert hydrologic information/QPF, rivers]
- .CLIMATE...[Insert climatological information/records, long range outlook]
- .PRELIMINARY POINT TEMPS/POPS...[Insert temp/pop data - use plain language site names for easy identification]

Topic dividers should be logically ordered *beneath* the mandatory introductory dividers based on the significance of the information. However, there are *two exceptions* as follows:

- (1) If “.SYNOPSIS...” is used, it should be ordered *above* the mandatory introductory divider as a broad overview to the discussion that follows.
- (2) If “.UPDATE...” is used, it should be ordered *above* the mandatory introductory divider to ensure it is not overlooked by the reader. If the update also refers to the synopsis portion, the “.UPDATE...” may be placed above the “.SYNOPSIS...” section as appropriate.

When a WFO generates preliminary point temps/pops, the “.PRELIMINARY POINT TEMPS/POPS...” should be the *final* topic divider.

2.3.5.2 Watch/Warning/Advisory Block. The Watch/Warning/Advisory Block is a list of the active hazards and the areas affected. This section will be formatted as follows:

" .XXX WATCHES/WARNINGS/ADVISORIES . . ." beginning at the left margin and one blank line below the last line of the text, where XXX is the modernized three letter identifier of the issuing office. If a WFO's County Warning and Forecast Area (CWFA) falls entirely within one state, the use of state identifications are not necessary. If a WFO's CWFA covers multiple states, begin a new line with the two-letter state identification followed by three dots (...) and the list of watches, warnings and advisories applicable to that state. (See Figure 1 for format example).

FXaaii cccc ddhhmm AFDxxx	<i>WMO heading AWIPS ID</i>
<u>Product Format</u>	<u>Description of Entry</u>
AREA FORECAST DISCUSSION (see section 5.3.3 for exceptions) NATIONAL WEATHER SERVICE city state time am/pm time_zone day mon dd yyyy	<i>(MND/NWS Product Name) (Issuing Office or Agency) (Issuing Time/Date)</i>
...[headline to highlight any topical forecast information]...	<i>(Topical Headline - Optional)</i>
.UPDATE... &&	<i>(Optional, but if used it should appear above the introductory divider and may appear above .SYNOPSIS as appropriate)</i>
.SYNOPSIS... &&	<i>(Optional, but if used it should appear above the introductory divider)</i>
.DISCUSSION... <i>or</i>	<i>(Mandatory)</i>
.NEAR TERM [time period]... .SHORT TERM [time period]... .LONG TERM [time period]...	
[insert narrative text]	
&&	
.MARINE... &&	<i>(Optional)</i>
.AVIATION... &&	<i>(Optional)</i>
.FIRE WEATHER... &&	<i>(Optional)</i>
.HYDROLOGY... &&	<i>(Optional)</i>
.CLIMATE... &&	<i>(Optional)</i>
.PREV DISCUSSION... &&	<i>(Optional)</i>
.PRELIMINARY POINT TEMPS/POPS... site name ttt ttt ttt / ppp ppp ppp ppp site name ttt ttt ttt / ppp ppp ppp ppp etc... &&	<i>(Optional)</i>
.[XXX] WATCHES/WARNINGS/ADVISORIES...(where XXX=issuing office 3-letter identifier) [watch, warning, advisory information and associated locations or enter the word "NONE" followed by a period]	
<i>OR...FOR MULTIPLE STATES USE THE FOLLOWING FORMAT:</i>	
[ST]...[watch, warning, advisory information and associated locations or NONE]. (where ST = two letter state ID)	
[ST]...[watch, warning, advisory information and associated locations or NONE].	
\$\$ Name/Initials/Forecaster ID(s)	<i>(Optional)</i>

Figure 1. Area Forecast Discussion Product Format.

2.4 Updates and Corrections. AFDs should be updated between regular issuances to explain major changes to the forecast, to provide a technical explanation of mesoscale trends, or supply information which may be of particular interest to users. A previous AFD (or significant portions of a previous AFD) may be appended to the update to provide background information and a more thorough discussion of the entire forecast. For clarity, the issuance time of the previous AFD should also be included. WFOs will correct AFDs for format and grammatical errors as required. Users may more easily recognize AFD section changes when using the Internet (red color) highlight option. Offices may also utilize the glossary option for web presentation of the AFD to improve its readability. An example of this option is contained within the example AFD in Appendix A.

3. **Area Forecast Matrices (product category AFM).**

3.1 Instructions for the Area Forecast Matrices (AFM) can be found in NWSI 10-204: Derived Forecast Text Products Specifications.

Link: http://www.weather.gov/os/public/dir/AFM_Specifications.pdf

4. **Coded Cities Forecast (product category CCF).**

4.1 Instructions for the Coded Cities Forecast (CCF) can be found in NWSI 10-204: Derived Forecast Text Products Specifications.

Link: http://www.weather.gov/os/public/dir/CCF_Specifications.pdf

5. **Point Forecast Matrices (product category PFM).**

5.1 Instructions for the Point Forecast Matrices (PFM) can be found in NWSI 10-204: Derived Forecast Text Products Specifications.

Link: http://www.weather.gov/os/public/dir/PFM_Specifications.pdf

6. **Recreation Report (product category REC).**

6.1 Mission Connection. The Recreation Report (REC) relays reports on conditions for resorts and recreational areas. This report, which may also contain forecast information, is for the general public.

6.2 Issuance Guidelines.

6.2.1 Creation Software. The REC may be composed using the AWIPS text editor or any other text editor.

6.2.2 Issuance Criteria. The REC does not have mandatory issuance criteria. Issuance criteria should be determined based upon user needs.

6.2.3 Issuance Time. The REC is a non-scheduled product issued on an as needed basis. Release times should be determined locally based upon user needs.

- 6.2.4 Valid Time. RECs are valid from the time of release until the next issuance.
- 6.2.5 Product Expiration Time. The REC product expiration time is determined locally.
- 6.2.6 Event Expiration Time. Not applicable.
- 6.3 Technical Description.
 - 6.3.1 UGC Type. The REC may use Zone coding or descriptive geographic terminology, as appropriate.
 - 6.3.2 MND Broadcast Instruction Line. The REC does not contain an MND Broadcast Instruction Line.
 - 6.3.3 MND Product Type Line. The REC does not have a mandatory MND. The MND should be descriptive in nature and determined based upon user needs.
 - 6.3.4 Content. The REC may contain the entire range of meteorological variables, e.g., sky cover, weather, wind, temperature, snow depth, tides, water temperature, etc. Specific content should be determined based upon user needs.
 - 6.3.5 Format. The REC is a free-form text product.

SXaaii cccc ddhhmm	<i>(WMO Heading)</i>
RECxxx	<i>(AWIPS ID)</i>
stZ.....	<i>(UGC:Zone, if applicable)</i>
RECREATION FORECAST (or similar)	<i>(MND)</i>
NATIONAL WEATHER SERVICE city st	<i>(Issuing Office)</i>
time am/pm time_zone day mmm dd yyyy	<i>(Issuing time and date)</i>
[TEXT]	
\$\$	<i>(UGC Delimiter)</i>
Name/Initials/Fcstr ID	<i>(Optional)</i>

Figure 7. Recreational Forecast Generic Format.

- 6.4 Updates and Corrections. Corrections are issued as required. Updates are issued based upon user needs.
- 7. **State Forecast Product (product category SFP)**.
 - 7.1 Instructions for the State Forecast Product (SFP) can be found in NWSI 10-204: Derived Forecast Text Products Specifications.
 Link: http://www.weather.gov/os/public/dir/SFP_Specifications.pdf

8. **Tabular State Forecast Product (product category SFT).**

8.1 Instructions for the Tabular State Forecast Product (SFT) can be found in NWSI 10-204: Derived Forecast Text Products Specifications.

Link: http://www.weather.gov/os/public/dir/SFT_Specifications.pdf

9. **Zone Forecast Product (product category ZFP).**

9.1 Instructions for the Zone Forecast Product (ZFP) can be found in NWSI Directive 10-204: Derived Forecast Text Products Specifications.

Link: http://www.weather.gov/os/public/dir/ZFP_Specifications.pdf

APPENDIX A – Product Guidelines and Examples

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1. Area Forecast Discussion Example

FXUS62 KCHS 281438
AFDCHS

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE CHARLESTON SC
1038 AM EDT FRI AUG 28 2009

.SYNOPSIS...

AN UPPER LEVEL LOW PRESSURE SYSTEM WILL MOVE ACROSS THE REGION TODAY AS TROPICAL STORM DANNY PASSES WELL EAST OF THE AREA. DANNY WILL ACCELERATE NORTHEAST AWAY FROM THE REGION EARLY THIS WEEKEND. A COLD FRONT WILL APPROACH THE AREA FROM THE WEST SUNDAY...THEN WILL SLOWLY MOVE THROUGH THE REGION EARLY NEXT WEEK. HIGH PRESSURE WILL THEN BUILD OVER THE SOUTHEAST STATES FOR THE MIDDLE AND LATTER PART OF THE NEXT WEEK.

&&

.NEAR TERM /UNTIL 6 PM THIS EVENING/...
MORNING SATELLITE IMAGES SHOW A WELL DEFINED UPPER LEVEL LOW PRESSURE SPINNING OVER SOUTHEAST ALABAMA WITH AN IMPRESSIVE DIFLUENCE SIGNATURE NOTED OVER MUCH OF GEORGIA. THE UPPER LOW IS FORECAST TO GRADUALLY MOVE NORTHEAST TODAY AS SHORTWAVE ENERGY CURRENTLY DIGGING ACROSS THE UPPER MISSISSIPPI VALLEY HELPS TO FINALLY KICK THE SYSTEM OUT. LOOKS LIKE THE STRONGER UPPER LEVEL DYNAMICS WILL REMAIN ACROSS THE MIDLANDS...HOWEVER DECENT UVM COUPLED WITH HIGH PWATS AND SOME SURFACE BASED INSTABILITY WILL SUPPORT NUMEROUS SHOWERS AND TSTMS THIS AFTERNOON. ALREADY SEEING QUITE A BIT OF ACTIVITY FIRING ALONG THE NORTH GEORGIA COAST IN AN AREA OF ENHANCED COASTAL CONVERGENCE ASSOCIATED WITH THE OUTER MOST FRINGES OF TROPICAL STORM DANNY.

THERE WILL BE A RISK FOR HEAVY RAIN WITH STORM MOTIONS EXPECTED TO REMAIN AROUND 10 KT. WIND FIELDS WILL SUPPORT CONVECTIVE TRAINING... SO WE WILL CONTINUE TO WATCH FOR THE POTENTIAL FOR FLOODING RAINS TO DEVELOP. 1-HR AND 3-HR FLASH FLOOD GUIDANCE REMAIN HIGH...SO NOT ENOUGH EVIDENCE TO JUSTIFY A FLASH FLOOD WATCH AT THIS POINT. TRENDS WILL BE MONITORED THROUGHOUT THE DAY HOWEVER. ALSO CAN NOT COMPLETELY RULE OUT AN ISOLATED TORNADO OR TWO WITH MODEST DEEP SHEAR IN PLACE. THE GREATEST TORNADO RISK WILL LIKELY BE AT THE COAST WHERE A WATERSPOUT COULD MOVE ONSHORE. THE OVERALL RISK PROBABILITIES ARE TOO LOW TO JUSTIFY A MENTION IN THE HAZARDOUS WEATHER OUTLOOK.

PLAN TO INCREASE POPS TO 70 PERCENT ACROSS ENTIRE FORECAST AREA WITH THE MORNING UPDATE. COULD PROBABLY JUSTIFY CATEGORICAL POPS AT SOME POINT BUT SHORT TERM MODEL GUIDANCE IS SHOWING CONFLICTING SOLUTIONS OF WHERE THE AXIS OR AXES OF HEAVIEST RAINS WILL DEVELOP. EXTENSIVE CLOUD COVER WILL LIMIT HIGHS TO THE MID 80S.

WE CONTINUE TO CAREFULLY WATCH TROPICAL STORM DANNY THIS MORNING. IT APPEARS THE CENTER OF THE EXPOSED CIRCULATION HAS MOVED WESTWARD OVER THE PAST SEVERAL HOURS. ITS UNCLEAR IF TREND WILL CONTINUE INTO THE AFTERNOON...BUT MODELS ARE STILL IN AGREEMENT THAT DANNY WILL BEGIN TO MOVE MORE NORTHWARD AS THE UPPER LOW

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EJECTS OUT OF THE SOUTHEAST STATES. THERE ARE NO PLANS TO RAISE TROPICAL STORM WATCHES FOR THE SOUTH CAROLINA/GEORGIA COAST OR ADJACENT COASTAL WATERS...BUT THIS ASSUMES DANNY WILL RESUME A MORE NORTHWARD PATH LATER TODAY.

&&

.SHORT TERM /6 PM THIS EVENING THROUGH 6 PM SATURDAY/... AS THE SHORT WAVE TROUGH LIFTS NORTHEAST AWAY FROM THE REGION THIS EVENING...EXPECT SHOWERS AND THUNDERSTORMS TO DIMINISH IN COVERAGE FROM SOUTHWEST TO NORTHEAST. THINNING CLOUD COVER...ABUNDANT LOW LEVEL MOISTURE AND LIGHT WINDS WILL PROMOTE THE FORMATION OF FOG AND/OR LOW STRATUS LATE TONIGHT ACROSS MUCH OF THE AREA. LOW TEMPERATURES ARE EXPECTED TO RANGE FROM THE UPPER 60S WELL INLAND TO AROUND 70 OR IN THE LOWER 70S CLOSER TO THE COAST.

A WEAK RIDGE OF HIGH PRESSURE WILL BUILD INTO THE REGION ON SATURDAY. A LACK OF DEEP MOISTURE OR ANY STRONG FORCING MECHANISM WILL LIMIT THE COVERAGE OF ANY SHOWERS AND THUNDERSTORMS TO ISOLATED ACROSS THE AREA...MAINLY IN THE AFTERNOON. TEMPERATURES SHOULD RETURN TO NEAR NORMAL...WITH HIGHS GENERALLY AROUND 90 AWAY FROM THE IMMEDIATE COAST.

&&

.LONG TERM /SATURDAY NIGHT THROUGH THURSDAY/... MEDIUM RANGE GUIDANCE IS IN FAIRLY GOOD AGREEMENT WITH THE OVERALL SYNOPTIC PATTERN THIS WEEKEND...WITH SOME DISAGREEMENT AMONGST THE VARIOUS SOLUTIONS WITH RESPECT TO THE PROGRESSION OF THE COLD FRONT THROUGH THE REGION DURING THE EARLY PART OF NEXT WEEK.

A WEAK RIDGE OF HIGH PRESSURE WILL BUILD BACK INTO THE FORECAST AREA SATURDAY AND SATURDAY NIGHT...BEFORE A COLD FRONT BEGINS TO APPROACH FROM THE WEST ON SUNDAY. THE COLD FRONT IS EXPECTED TO SLOWLY PUSH THROUGH THE FORECAST AREA EARLY NEXT WEEK...WITH HIGH PRESSURE THEN BUILDING BACK IN FROM THE NORTH FOR THE MIDDLE AND LATTER PART OF NEXT WEEK. AS FOR FORECAST DETAILS...WILL CARRY SLIGHT CHANCE/LOW CHANCE POPS SUNDAY FOR MAINLY AFTERNOON/EVENING CONVECTION. DEEPER MOISTURE WILL MOVE BACK INTO THE REGION SUNDAY NIGHT INTO TUESDAY...AND WILL CARRY CHANCE POPS FOR MOST OF THE AREA DURING THIS PERIOD...ALTHOUGH THE HIGHEST VALUES WILL LIKELY BE DURING THE DAY. GUIDANCE SHOWS DEEPEST MOISTURE PUSHING EAST OF THE REGION WEDNESDAY AND THUS WILL ONLY CARRY SLIGHT CHANCE POPS. AS HIGH PRESSURE BUILDS FROM THE NORTH...LONG NORTHEASTERLY FETCH COULD BRING SOME SHOWERS BACK INTO COASTAL SOUTHEAST GEORGIA THURSDAY.

TEMPERATURES ARE EXPECTED TO RUN ABOVE NORMAL THROUGH MONDAY BEFORE RETURNING TO BELOW NORMAL LEVELS TUESDAY THROUGH THURSDAY.

&&

.AVIATION... KCHS...LOW STRATUS COULD RESULT IN TEMPORARY MVFR OR LOWER CEILINGS THROUGH ABOUT 14Z. SHOWERS ARE POSSIBLE IN THE VICINITY OF THE TERMINAL AS EARLY AS MID MORNING...BUT COVERAGE SHOULD INCREASE BY MID AFTERNOON AS AN UPPER LEVEL LOW SHIFTS TOWARD THE AREA. THEREFORE...THE TAF WILL REFLECT TEMPORARY MVFR OR LOWER CONDITIONS DUE TO SHOWERS AND ISOLATED THUNDERSTORMS BETWEEN 18Z

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AND 22Z. VFR CONDITIONS WILL GENERALLY PREVAIL AFTER 23Z AS THE UPPER LOW PULLS AWAY FROM THE AREA...BUT THERE IS THE POTENTIAL FOR LOW CEILINGS AND FOG TOWARD DAYBREAK SATURDAY WITH MVFR OR LOWER CONDITIONS POSSIBLE.

KSAV...LOW STRATUS WILL RESULT IN MVFR OR LOWER CEILINGS AT TIMES THROUGH 14Z. SHOWERS AND ISOLATED THUNDERSTORMS COULD IMPACT THE TERMINAL AT NEARLY ANY TIME THROUGH THE MID-LATE AFTERNOON HOURS WITH MVFR OR LOWER CONDITIONS POSSIBLE...BUT IT LOOKS LIKE THE GREATEST CHANCES ARE BETWEEN 14Z AND 18Z AS AN UPPER LEVEL LOW SHIFTS TOWARD THE AREA. AS A RESULT...THE TAF WILL REFLECT PREVAILING MVFR CONDITIONS IN SHOWERS AND ISOLATED THUNDERSTORMS DURING THIS TIME PERIOD. VFR CONDITIONS WILL GENERALLY PREVAIL AFTER 22Z AS THE UPPER LOW PULLS AWAY FROM THE AREA...BUT THERE IS THE POTENTIAL FOR LOW CEILINGS AND FOG TOWARD DAYBREAK SATURDAY WITH MVFR OR LOWER CONDITIONS POSSIBLE.

EXTENDED AVIATION OUTLOOK...MVFR OR LOWER CONDITIONS ARE POSSIBLE IN THE LATE NIGHT/EARLY MORNING HOURS SUNDAY DUE TO LOW STRATUS AND FOG. OTHERWISE...VFR CONDITIONS WILL GENERALLY PREVAIL THROUGH TUESDAY OUTSIDE OF SCATTERED AFTERNOON/EVENING SHOWERS AND THUNDERSTORMS.

&&

.MARINE...
DECIDED TO EXPAND THE SMALL CRAFT ADVISORY TO INCLUDE THE REMAINDER OF THE NEARSHORE WATERS. SWELLS ASSOCIATED WITH TROPICAL STORM DANNY WILL CONTINUE TO BUILD TODAY...LIKELY PEAKING BY LATE AFTERNOON WITH SEAS OF 4-6 FT NEARSHORE AND 6-9 FT OVER THE GEORGIA OFFSHORE WATERS. ALSO WINDS ARE EXPECTED TO BECOME ENHANCED ALONG THE SOUTH CAROLINA COASTAL WATERS AS THE GRADIENT BEGINS TO PINCH. IN FACT...OUR LOCAL WORKSTATION WRF ACTUALLY PINCHES OFF A WEAK LOW CENTER EAST OF TYBEE ISLAND BY AFTERNOON. SHOULD THIS OCCUR...WINDS AS HIGH AS 15-20 KT COULD OCCUR... ESPECIALLY NORTH OF EDISTO BEACH. HAVE CAPPED WINDS AT 15 KT FOR NOW UNTIL SHORT TERM TRENDS BECOME CLEARER.

AS DANNY ACCELERATES NORTHEAST AWAY FROM THE REGION INTO EARLY THIS WEEKEND...WINDS AND SEAS WILL DIMINISH. HOWEVER...LINGERING LONG PERIOD SWELL WILL REQUIRE THE SMALL CRAFT ADVISORIES TO REMAIN IN EFFECT THROUGH TONIGHT FOR THE NEAR SHORE SOUTH CAROLINA WATERS NORTH OF EDISTO BEACH AND THROUGH MUCH OF SATURDAY FOR THE OUTER GEORGIA WATERS.

SATURDAY NIGHT THROUGH TUESDAY...WEAK HIGH PRESSURE WILL BUILD OVER THE WATERS SATURDAY NIGHT. A COLD FRONT WILL THEN SLOWLY APPROACH FROM THE WEST SUNDAY AND SUNDAY NIGHT...THEN SLOWLY MOVE EAST THROUGH THE WATERS INTO MID WEEK. WINDS AND SEAS ARE EXPECTED TO REMAIN BELOW SMALL CRAFT THRESHOLDS DURING THIS PERIOD.

RIP CURRENTS...MORNING WEB CAMS INDICATE A DECENT 10-11 SECOND SWELL IS IMPACTING THE BEACHES WITH RATHER NASTY CONDITIONS OCCURRING IN THE SURF ZONE. WILL UPGRADE THE RIP CURRENT RISK TO HIGH WITH SLIGHTLY HIGHER WINDS EXPECTED AT THE BEACHES THIS AFTERNOON.

WATERSPOUTS...MOST FACTORS APPEAR FAVORABLE FOR WATERSPOUTS

TODAY...PROVIDED THAT THERE ARE CONVERGENCE BOUNDARIES FOR THEM TO FORM ALONG. WE HAVE ADDED MENTION OF THESE CONDITIONS INTO THE HAZARDOUS WEATHER OUTLOOK.

&&

.CHS WATCHES/WARNINGS/ADVISORIES...

GA...NONE.

SC...NONE.

MARINE...SMALL CRAFT ADVISORY UNTIL 11 PM EDT THIS EVENING FOR AMZ352-354.

SMALL CRAFT ADVISORY UNTIL 6 PM EDT SATURDAY FOR AMZ374.

SMALL CRAFT ADVISORY UNTIL 6 AM EDT SATURDAY FOR AMZ350.

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NAME(S)/INITIALS/FCSTR ID(S) (Optional)

2. Recreational Report (REC) Examples.

2.1 Fort Peck Lake Recreational Forecast.

SXUS45 KGGW 281535

RECGGW

FORT PECK LAKE RECREATION FORECAST
NATIONAL WEATHER SERVICE GLASGOW MT
935 AM MDT FRI AUG 28 2009

MTZ017-022-023-290015-

DAM AREA OF FORT PECK-DUCK CREEK-YORK ISLAND-HAXBY POINT-
935 AM MDT FRI AUG 28 2009

.REST OF TODAY...HIGHS 80 TO 85. NORTH WINDS AROUND 10 MPH.

.TONIGHT...LOWS AROUND 55. NORTH WINDS AROUND 10 MPH EARLY IN THE EVENING BECOMING LIGHT.

.SATURDAY...HIGHS 80 TO 85. EAST WINDS 10 TO 15 MPH.

.SATURDAY NIGHT...LOWS AROUND 50. EAST WINDS 10 TO 15 MPH.

\$\$

MTZ022-023-290015-

DRY ARM AREA OF FORT PECK-ROCK CREEK-NELSON CREEK-TIMBER CREEK-
935 AM MDT FRI AUG 28 2009

.REST OF TODAY...HIGHS 80 TO 85. NORTH WINDS AROUND 10 MPH.

.TONIGHT...LOWS 50 TO 55. NORTH WINDS AROUND 10 MPH EARLY IN THE EVENING BECOMING LIGHT.

.SATURDAY...HIGHS AROUND 80. LIGHT AND VARIABLE WINDS BECOMING EAST AROUND 10 MPH IN THE LATE MORNING.

.SATURDAY NIGHT...LOWS AROUND 50. EAST WINDS AROUND 10 MPH.

\$\$

MTZ016-017-021-022-290015-
 WEST END OF FORT PECK-THE PINES-HELL CREEK-UL BEND-CROOKED CREEK-
 935 AM MDT FRI AUG 28 2009

.REST OF TODAY...HIGHS 80 TO 85. LIGHT AND VARIABLE WINDS
 BECOMING NORTH AROUND 10 MPH IN THE AFTERNOON.
 .TONIGHT...LOWS AROUND 55. NORTHEAST WINDS AROUND 10 MPH EARLY IN
 THE EVENING BECOMING LIGHT.
 .SATURDAY...HIGHS 80 TO 85. LIGHT AND VARIABLE WINDS BECOMING
 SOUTHEAST 10 TO 15 MPH IN THE AFTERNOON.
 .SATURDAY NIGHT...LOWS AROUND 50. EAST WINDS 10 TO 15 MPH.

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2.2 Mount Rainier Recreational Forecast.

SXUS46 KSEW 281234
 RECSEW

MOUNT RAINIER RECREATIONAL FORECAST
 NATIONAL WEATHER SERVICE SEATTLE WA
 530 AM PDT FRI AUG 28 2009

.SYNOPSIS
 A LOW PRESSURE SYSTEM OFFSHORE WILL CONTINUE TO APPROACH
 THE AREA DURING THE DAY TODAY...RESULTING IN INCREASING CLOUDS.
 EXPECT THE LOW PRESSURE SYSTEM TO MOVE OVER WESTERN WASHINGTON
 TONIGHT FOR A BETTER CHANCE OF SHOWERS...ALONG WITH A RISK OF
 THUNDERSTORMS. THE UPPER LOW WILL SLOWLY MOVE SOUTHEAST DURING THE
 DAY SATURDAY...THEREBY KEEPING THE THREAT OF SHOWERS GOING. DRY
 WEATHER WILL RETURN ON SUNDAY AS HIGH PRESSURE BUILDS OVER THE AREA.

&&

.TODAY...INCREASING CLOUDS. FREEZING LEVEL 13500 FEET.
 .TONIGHT...MOSTLY CLOUDY WITH A CHANCE OF SHOWERS OR THUNDERSTORMS.
 SNOW LEVEL 12000 FEET.
 .SATURDAY...MOSTLY CLOUDY WITH A CHANCE OF SHOWERS OR THUNDERSTORMS.
 SNOW LEVEL LOWERING TO 10500 FEET.
 .SATURDAY NIGHT...MOSTLY CLOUDY. A CHANCE OF SHOWERS OR THUNDERSTORMS.
 SNOW LEVEL 10500 FEET.
 .SUNDAY...PARTLY SUNNY. A CHANCE OF MORNING SHOWERS. SNOW LEVEL
 RISING TO 12500 FEET.
 .SUNDAY NIGHT...BECOMING MOSTLY CLEAR. FREEZING LEVEL 14500 FEET.

&&

TEMPERATURE AND WIND FORECASTS FOR SELECTED LOCATIONS.

		TODAY	TONIGHT	SAT	SAT NIGHT	SUN
SUMMIT (14411 FT)		24	18	14	23	28
		S 55	W 25	N 17	N 15	NE 10
CAMP MUIR(10188 FT)		52	46	37	34	42
		S 35	W 17	N 12	NE 12	E 10

NWSI 10-503 NOVEMBER 10, 2009

PARADISE (5420 FT)	70	47	58	45	67
	SE 8	SW 6	NW 6	N 6	N 6
LONGMIRE (2700 FT)	80	50	69	48	76
	CALM	CALM	CALM	CALM	CALM

++ TEMPERATURES AND WIND FOR THE SUMMIT AND CAMP MUIR ARE AVERAGE CONDITIONS EXPECTED IN THE FREE AIR AT THOSE ELEVATIONS.
++ TEMPERATURES FOR PARADISE AND LONGMIRE ARE THE EXPECTED HIGHS AND LOWS. WIND IS THE AVERAGE WIND EXPECTED DURING THAT PERIOD.

.EXTENDED FORECAST...

.MONDAY...MOSTLY SUNNY. FREEZING LEVEL 14000 FEET.

.MONDAY NIGHT AND TUESDAY...MOSTLY CLEAR. FREEZING LEVEL 13500 FEET.

.TUESDAY NIGHT AND WEDNESDAY...MOSTLY CLEAR. FREEZING LEVEL 13000 FEET.

.WEDNESDAY NIGHT...MOSTLY CLEAR. FREEZING LEVEL 13500 FEET.

.THURSDAY...PARTLY SUNNY. FREEZING LEVEL 13500 FEET.

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APPENDIX B - Federal Meteorological Handbook No. 1

The following web link will access the latest edition of Federal Meteorological Handbook No. 1(FMH-1), "Surface Weather Observations and Reports" which embodies the United States conversion to the World Meteorological Organization's (WMO) Aviation Routine Weather Report/Aviation Selected Special Weather (METAR/SPECI) code formats. It was compiled under the auspices of the Office of the Federal Coordinator for Meteorological Services and Supporting Research and embodies the work of meteorological code experts from the United States Departments of Commerce, Transportation, Defense, and Energy. The FMH-1 incorporates all of the United States' exceptions to the international METAR/SPECI format standard that is prescribed in the World Meteorological Organization's Publication No. 306 on Meteorological Codes.

FMH-1, Surface Weather Observations and Reports and Related Pen and Ink Changes:
<http://www.ofcm.gov/fmh-1/fmh1.htm>

APPENDIX C - US Department of Transportation FAA 7340.1[x] Contractions

The following web link will access the list of official USA-AERONAUTICAL CONTRACTIONS. These approved word and phrase contractions are used by personnel of the Federal Aviation Administration (FAA). This list is also used by other agencies (including the NWS) that provide air traffic control, communications, weather, charting, and associated services.

FAA Contractions: <http://www.faa.gov/ATPUBS/CNT/2-1.HTM>