

##### ALL CHANGES BELOW THROUGH 12/15/08 #####

Version OB9

- Added Guardian messages to remind user to select HLS (marine) subheadlines. (DR20596/DR20651)
- Added capability to select subheadlines for the HLS (marine) products. (DR20440)
- NWRWAVES failed to parse and replace the "/" with " OR, " when dual-time zone generated by other formats than GHG (DR\_20506)
- NWRWAVES will fail due to Alaska changed their time zone from "ADT" to "AKDT". (DR\_20462)
- Fails to process headline phrase replacements in HLS products. (DR\_20463)
- Routine update to UGClookup.table (DR20464) - Corrected 2 SD zones and duplicated from DR\_20027.
- Added special cases in NO\_CTA.ini config file rules for FLS and FLW overview products. (DR20254)
- Test products (e.g. FFW/FFS) for cancellation are erroneously sent to CRS. (DR19590)
- The summary message (test mode) erroneously is sent to CRS (DR19615 - not fixed in OB8.2's DR18743).
- Need monthly test for transmitter service area across the whole state. UGC code of LAC XXC000 (where XX= 2 chars state code, e.g. MEC000 for all counties in Maine) is now supported. (DR19614)
- NWRWAVES Setup GUI will not accept a marine based (MARINE) local LAC but only the state code. (DR19679)
- Introduction words not being output in the NPW products for a single zone. (DR19864)
- NWRWAVES does not suppress NWRSAME Tone during the silence period under the NWR Only situation. (DR19957)
- Selectively specify transmission status based on issuing WFO. By adding an "--EXTERNAL" argument in the text trigger to the nwrwaves.csh script, neighbor's product can be placed in the /pending directory. (DR20069)
- Implemented a filter option to parse Call To Action CTA statements for all the new OB9 warning products. (DCS3510)

##### ALL CHANGES BELOW THROUGH 08/20/08 #####

Version OB8.3.1

- NWRWAVES will fail due to Alaska changed their time zone from "ADT" to "AKDT". (DR\_20437)
- Fails to process headline phrase replacements in HLS products. (DR\_20403)
- Routine update to UGClookup.table (DR20027) - Correct the missing "a" from "of line" to "of a line" for GRB and MQT.
- Routine update to UGClookup.table (DR20027) - Correct the missing space from "60nm" to "60 nm" for MLB.
- Routine update to UGClookup.table (DR20027)-new changes for WFOs of MQT, LOX and OKX.

Version OB8.3

- Implemented "SWAPS" capability. (DCS3428)
- Added print options in the NWRBrowser GUI and Viewing window. (DCS3483)
- MWW product support for marine sites. Options to process CTA. (DCS3485)
- Routine update to UGClookup.table (DR19288)-new changes for WFOs LOT,MLB,CAR,OPC,GYX,VEF,GSP,PQR and MTR. Mike Hudson provided many changes to the Great Lakes marine zones.
- Remove a "space" in the output filename when encounters 8 characters PILs.(DR19382)
- Product Expiration time for cancellations is now configurable. (DR19469)
- Fix the bug to remove the slash with dual time zones at noon or midnight.(DR19474)
- Updated 5 Indiana counties to return to Eastern Time Zone. This was delivered in OB8.1.2 release (DR19504)

Version OB8.2.1 (Only a few Great Lakes marine sites issue the GLF product

will be affected by this release)

-Corrected a problem where only the first segment of the GLF product was processed. (DR19576)

#### Version OB8.2

- Incorrectly issues red banner TEST message. (DR19057)
- Improved Control of SAME and Alert Tones (DCR-3426).
- Facilitated the removal of a core county/zone per transmitter (DCR-3429)
- Reworked GUI Interface to use version number to reflect AWIPS build (DCR-3430).
- Added capability to list counties or zones by alphabetical and numeric orders (DCR-3435).
- The summary message erroneously is sent to CRS (DR18743). There are no software changes other than requesting the sites to make a configuration change. Briefly under the "SummaryMessage/Misc Settings" tab in the nwrwaves\_setup GUI, it is recommended to set the entry "# of Bulletins to Trigger Summary:" to the maximum number (e.g. 30).
- Silence Period failure when crossing calendar day (DR18341).
- Routine update to UGClookup.table (DR18348) - new changes for WFOs MFL, TAE, MTR, PSR and OKX.
- Unable to handle double headlines for GLF product (DR18775).
- Unable to decode VTEC line that contains extra white space (DR18742).
- Overview product will now go to Pending if designated as such in the NWRWAVES Setup GUI (DR18739).
- Upgraded/Cancellation products undergoing MRD replace now have a 15 minute expiration (up from 10 previously)
- Upgraded/Cancellation products now include the intro/preamble phrases, county/zone list, and/or issued time phrases if selected in the NWRWAVES setup GUI (DR18740).
- Bug fixed in the UGC\_VTEC Decoder, correcting an extremely rare occurrence where a multi-segmented product would have the first segment cross into the next month, but a followup segment did not. For example, a product issued on the afternoon of Jan 31st had a winter storm warning through Feb 1st, and a short term snow advisory through the remainder of the afternoon. The second segment's expiration month was also adjusted, resulting in an impossible date of Feb 31st. (DR18741)

#### Version OB8.1

-WCN marines zone(s) cancellation is never removed. (DR18898 4/25/07)

#### Version OB7.2 (All version numbers designed to match AWIPS Build IDs)

- Relocated check for NEW VTEC in WCN product. In the instance of a watch replacement, we need to process the initial CAN VTEC line before ignoring the following NEW VTEC line (alarm handled via WOU). Previously, this check was performed too early in the code, causing the entire product to be ignored. Resultant effect was the old message continued to play on NWR (DR17930).
- Made minor changes to TCW product handling. The "overview" section of this product is the storm type/name (e.g. .HURRICANE KATRINA), and is used in the message formation. We need to unset this overview section after processing to avoid the generation of a separate overview product (DR17931).
- Enhanced priority scheme code for multiple VTEC products to ensure correct product assignment to NWR (DR17932).
- Modified ISO Charset for Spanish products for WFO San Juan in order to fix incompatibility issues with RHEL
- Spanish products (designated by an AWIPS PIL ending in SPN) will now have a CRS PIL header whose first three characters begin with 'SPN' WHEN THE TRANSMITTER SPECIFIC OPTION FOR THAT PRODUCT IS USED. This will ensure a unique CRS PIL is established to differentiate between English and Spanish products if the transmitter specific option is used. (For generic message type

products, the last 3 characters in the CRS PIL will already be SPN, so the first 3 will remain the state node - i.e. SJU).

- For AWIPS products containing 8 character PILs, products designated for generic message type will now correctly contain an 8 character CRS PIL instead of the preceding logic of using the last 3 characters. For example, STLRWSMO would now correctly be generated at STLRWSMO instead of STLRWSSMO.
- Fixed a bug which caused silence period to fail if the silence period crossed midnight LST.

Version OB7.1-2.61

- UGC\_VTEC\_Decoder modified to handle unique MND header storm/date code used by the National Hurricane Center.
- Fixed bug where LAC list in CRS message header was missing required dash between each LAC if a product opted for "generic message type" contains no UGC coding.
- Fixed bug where LACs in the CRS message header could potentially be duplicated in overview products as well as those assigned as "generic message types".
- Fixed bug that caused "county"-based phrasing to be appended to both zone and marine based products in the county/zone listing.
- Fixed bug that caused NWRWAVES to crash when processing a multiple-VTEC segment, assigned as a generic message type product. This error was caused by a syntax problem in formulating the filename for the NWRBrowser.
- Fixed bug that caused a cancellation/upgrade message to not be generated when it was part of a multi-line VTEC upgrade or replace. Resultant effect was that previously active product was not removed from NWR via MRD replace.
- Products that have been cancelled/upgraded per VTEC coding now use their segment text w/ 10 minute expiration imposed vs. a generic canned statement. This was done to broadcast potentially important information that may be included, especially in short fuse warnings.
- Optional county/zone listing has been cleaned up to remove extraneous white space. This was done to allow easier phrase replacement via the WordFile.txt file.
- Corrected CRS message header for separate Overview product.
- Malformatted products with extraneous double dollar sign sets (\$\$) will no longer crash NWRWAVES, but instead generate a red banner message alerting the WFO of product format errors.
- Added internal exit code if NWRWAVES is passed an argument file that does not exist in the QUEUE directory. The only instance in which this theoretically could happen is through duplicate file storage. In this case, NWRWAVES correctly processes the product, and then is tasked to process it again. However the file no longer exists (having been processed and then deleted during the first call). NWRWAVES will now exit cleanly in this instance.
- Modified product issuance time phrasing to use timezone(s) contained in message LAC list instead of AWIPS local time zone variable. This was changed since WFO timezone could differ from those counties/zones in the broadcast message, leading to potentially confusing wording.
- Corrected marine intro phrasing for wording when optional phrasing is not selected.

Version OB6.0.3-2.6 (V2.5 has been superceded for those who are curious)

- Word/phrase replacement will be effective even if original phrase extends multiple lines in product.
- WordFile\_SPN.txt will be invoked if Spanish product (CCCNNSPN) is detected.
- Spanish MND lines properly regexp decoded (thanks Sra. Pinhiero and Sra. Smith for HS Spanish lessons that finally paid off!)
- Corrected bug that caused UPG/CAN cancellation messages to not be generated.
- Modified UGC\_VTEC decoder to allow partial FIPS codes in the format of XX1234 where third character is a number instead of typical C or Z UGC.
- Fixed critical bug originating from XNOW UGC decoder, causing UGC\_VTEC

decoder to miss intermediate lines when UGC data spans more than 3 lines. This bug was relegated to very large watch boxes where the state-segmented initial WOU could span at least 3 lines.

- Added ability to override the effective start time of a broadcast (to be used in conjunction with periodicity)
- Added CAFE core county/zone capability, allowing offices to assign one FIPS and one ZONE code per transmitter. The core county/zone option limits NWRWAVES to processing, for each transmitter, only those product UGC segments that contain the core FIPS or ZONE code.
- Overview product will now be sent as a separate product using the PIL CCCOVRXXX where CCC = issuing office and XXX = legacy product PIL (e.g. EAXOVRWSW). Configuration settings for an overview can be found under OVR in the product configuration.
- Added additional marine enhancement so that WFOs can schedule which sections of the GLF product are to be broadcast on each transmitter. (No changes to existing config file necessary).
- Modified code structure to process multiple VTEC lines in a given segment. If multiple VTEC lines are detected, the following rules govern message generated:
  - 1.) A VTEC line that is a cancellation or upgrade is automatically generated as such with a 10 minute expiration time.
  - 2.) A VTEC line that contains a tone alertable product is automatically generated
  - 3.) Otherwise, a priority ranking scheme for all VTEC hazards is used to determine which of the remaining hazards is broadcast.
- Fixed a bug where if two zones had the same name, only the first UGC was added to the transmitter config file.
- YES/NO Setup GUI config options are greyed out for repeat headlines and summary message generation for non-VTEC products.
- Products generated in test mode will now use a VTEC\_Summary.TEST file to keep hazard tracking separate.
- Generic message type assembly option added to product configuration. Last 3 characters of CRS PIL will be the issuing WFO instead of transmitter specific (1 message generated). First 3 characters will be the state node of the product ID. Generally speaking the AWIPS PID will be the same as the output CRS PIL.
- Updates to UGClookup.table - changes can be found UGClookup\_changes.txt
- Updates for SJU to use AST4 instead of VST4
- Changes for GUAM going to ChST
- Single Threaded Processing has been implemented to eliminate possible overlap between TEST and LIVE mode products.
- TEST mode products will use a unique VTEC\_Summary.TEST file to avoid possible infusion into the live version (VTEC\_Summary.txt).
- OCONUS WCN "NEW" products will now be processed since SPC does not issue WOU products for them
- Products stored with a textdb SAVE in OB6 may not be triggered by NWRWAVES. New coding implemented in the AWIPS text editor, places a !--not sent--! frame as a preventative measure against inadvertant transmission. Products containing this tag will not be processed by NWRWAVES. This is done intentionally by design.

#### SETUP GUI CHANGES:

- 1.) Install script and GUI modified to handle new core county/zone and effective time fields.
- 2.) Per suggestion by AMA, GUI adjusted to align product configuration settings for easier setup.
- 3.) Modified a few of the help pop-ups to better explain scenarios that were deemed confusing based on listserv traffic.
- 4.) Removed 24 hour restriction on broadcast duration override.
- 5.) VIP (Concatenated Voice) pull down replaced by VIP (Default)
- 6.) Addition to handle transmitter specific GLF settings

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INITIAL NATIONAL DEPLOYMENT RELEASE

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Version OB6-2.4 (released 11/4/05)

- Modified setup GUI and processing to allow sites to disable VTEC processing for routine marine products (CWF,NSH,OFF,GLF)
- Modified routine marine product handling (CWF,NSH,OFF,GLF) to remove convective and tropical cyclone watch/warning VTEC content. This is done to avoid a potential duplicate tone alerting with the WOU/WCN or TCV products. NNRWAVES will track any CWF/NSH segment with tropical or convective watch VTEC as an MA.F.
- Added post-processing module to cancelled and summary messages as well
- Added ESF to default product config file.
- Fixed minor bug in Setup GUI CountySet procedure to correct false detection of duplicate zone listings.
- Changed default expiration time for automatic cancelled/removed products from 2 to 10 minutes to prevent CRS from receiving an expired message.
- Modified NWRbrowser file naming convention to include issuing WFO so that locating products would be easier. Format is now CCCNNNXXX\_\* where CCC = issuing WFO, NNN is CRS product ID, XXX is transmitter mnemonic.

Version 2.3b (released 10/27/05)

- Fixed illegal MRD 000 usage in ROU (routine) VTEC products. An MRD other than 000 will be assigned when the VTEC ETN of 0000 is used.
- Added logging output for test products
- Added watch (ETN) number to broadcast messages and summary messages for convective watches
- Modified tracking/MRD code to handle the WCN exception. Since this product overlaps CWA borders and WCN issuance is not mandatory or routine, we must add code to keep track of all WCN continued counties in the tracking file/issued CON regardless of which WFO issued the WCN. End result: any WCN that triggers NNRWAVES will still produce a transmitter-inclusive watch update product that lists all counties/parishes affected irregardless of CWA.
- Renamed CRS PIL for public tropical cyclone advisory (TCP) product to TC1-TC5 to handle to handle concurrent tropical systems.
- Added setup utility functionality to allow admin users to modify and delete Local Area Codes (LACs) in addition to adding them.
- Modified MND parser and post processing routine to handle new double time zone product format (i.e., "705 PM CDT / 605 PM MDT" within an AWIPS product). Code support still remains for legacy () format of multiple time zones.
- New install/upgrade script (combined) that cleans up LOGS, DEBUG, INPUT, OUTPUT, BACKUP and SUMMARY directories (moves their contents back into the operational NNRWAVES directory so that scour scripts can clean them). This addresses excessive inode usage in previous versions.
- Updated NNRWAVES browser so that a check is performed on files in the 'pending' directory, so that the purge function only offers to purge expired products.
- Updated nwrwaves.csh and nwrwavestest.csh trigger scripts to report AWIPS PID of the product that caused NNRWAVES to crash. This way, a CRS operator can take proactive steps to ensure that product gets onto CRS (be it checking the input AWIPS product for errors in VTEC or UGC lines, or manually recording/voicing the product on CRS).

Version 2.2b (released 9/6/05)

- Fixed bug in processing multi-segmented products where one or more segments contained an MND date/time line with multiple timezones.
- Fixed rare bug in MRD generation sequence where VTEC number ending in 09 would cause a conflict with Tcl interpreter attempting to add octal.
- Fixed similar bug in UGC\_VTEC decoder with 09 and September
- Modified code to allow numeric allowance in CRS issuance/follow-up PILs
- Modified code to keep marine zone segments in UGC (coastal) order versus

alphabetic order.

- Added code to check/bail on 0 byte files in the QUEUE directory
- Added code in the nwrwaves.csh/nwrwavestest.csh file to improve lockout capabilities in order to prevent multiple running instances of NWRWAVES. Multiple versions running was causing unpredictable product production behavior.
- Changed file naming convention for VTEC products stored in the OUTPUT directory. A timestamp is appended to the file names to prevent the files from being overwritten by newer versions.

Version 0818B (2.1 Beta Final) Change From EAX,NWSH and PBZ Final DT&E

- Ability to uniquely select FIPS vs. zone areas
- QC of UGClookup table, with addition of missing Atlantic synopsis zones, Arkansas and Arizona zones
- Establish baseline default product configuration settings
- Unique filenaming convention for output
- Added ending punctuation to open ended one-line bullets from WarnGen/GHG for better audio on CRS.
- Added consistent Save Edits buttons to all tabs in setup GUI
- Fixed program crash if UGCs were not found in any lookup tables
- Added ability to generate local LAC codes via localUGClookup.table
- Increased number of backup versions of config files from one to two.
- Invoked lock file to prevent multiple instances of setup GUI

Version 0803B (2.1b) Changes (FROM NWSHQ AND CRH DT&E)

- Fixed problem with Routine Marine forecasts using a VTEC # of 0000 causing software to fail
- Accounted for problems with incorrect MND Date/time groups (NCEP OPC) and extraneous double dollar signs (OKX)
- Added transmission option (CRS/pending) for summary message
- Added code to trim leading 0s from VTEC ETN number so that MRD calculations would not cause a failure due to Tcl/Octal problem.
- Added code to handle Independent Cities in summary message (known locations currently in Virginia, Baltimore MD and St. Louis MO)
- Upped min summary message threshold to 30.
- In the setup GUI, fixed summary message PIL "CCC" label to use local CCC instead of hardwired STL (to avoid confusion).
- Made changes to summary message generation code to handle independent cities
- Setup GUI saves existing files of config files as .bak (backups)
- Created INPUT directory to store incoming products. Purge set to 30 days.
- If no product configuration is found for a particular product, it will be processed but sent to Pending directory.
- Added setup GUI and code to handle differences between NHC and HPC Tropical Cyclone Products. Will allow ability to process either, and to strip tabular data from the HPC version.
- Added improved code to handle phone numbers within products for CRS broadcast. For example 1-888-123-4567 will become 1, 8 8 8, 1 2 3, 4 5 6 7
- Removed incorrect error logging for a non-VTEC product when a non-VTEC entry was correctly located in the product config file.
- Corrected default naming convention for transmitters to handle transmitter numbers >= 10. Will use NWx for 1-9 and Nxx for 10 and higher.
- Added flat file to handle allowable MRD Replace Usage for non-VTEC products.
- Replaced counties.ini and zones.ini with UGClookup.table to better handle zone overlap (fire weather) and marine related products
- Adjusted NWRWAVES code to use new lookup table
- Modified setup code to display active UGC codes when a given UGC listing is clicked in any of the listboxes.
- Made major changes to VTEC\_Summary.txt file storage to maintain replaced products which have not yet expired. Although these products are no longer broadcasting on CRS, their MRD numbers are still in use until expiration and must be retained. Therefore, added an "ACTIVE" flag to prevent these lines

from being utilized other than maintaining an "active" MRD set.

- Modified English time output to utilize timezone information present in UGClookup.table file. As a result, if a product should contain counties/zones from multiple time zones, the time output contained in the repeating statement and in the summary messages will list all applicable time zones.

#### Version 0628A (2.0a) Changes:

- Corrected bug for not including supplemental data.
- Fixed bug in Setup GUI induced by adding similarly named marine zones.
- Fixed bug where software would not process products w/o UGC (no MRD required)
- Added support for a SUMMARY command line argument to nwrwaves.tcl to allow the NWRBrowser to force a manual re-run of the summary messages
- NWRWAVES now maintains a flat file containing the current file being processed, such that in case of hard failure, the offending file can be moved to the ERROR directory.
- nwrwaves.csh will now added entry to date stamped log file in /LOGS and issue a red banner message in case of hard program failure
- UGC\_VTEC decoder had to be modified to handle 000000T0000Z event end time that is used ONLY in the TPC "TCV" product. Recommend that TPC instill valid times such that summary message can incorporate this information. Otherwise the hurricane/tropical storm watch/warning is open ended.
- Added setup GUI handling for HLS and GLF products. Attempted to make these as open ended as possible for future expansion/changes.
- Added an exit method such that if NWRWAVES encounters an alarmable product, but cannot find a valid UGC code it will not process.

#### Version 0614A Changes:

- Added TCV decoder to generate generic messages similar to WCN.
- Added Marine tab to Setup GUI and implemented first step with HLS subtitle replacement. New file created marine\_cfg.XXX
- Added MRD capability to non-VTEC products. Unique, but consistent MRD number is derived by converting the product PIN product code (e.g. NOW or SPS) to its Unicode character numbers. The 3 numbers are then multiplied by a constant and summed to create an MRD number.
- Modified code to handle transmitter specific MRD numbers to comply with CRS replacement issues.
- Fixed syntax in the instance that an MRD replaces multiple existing events (per the 0530A change).
- Corrected a few syntax errors in the product.cfg file (although it was good to see the Setup utility did not error on these).

#### Version 0530A Changes:

- Fixed bug in VTEC database management such that 1 VTEC string can in fact replace multiple lines the VTEC database (e.g. a single event with 2 segments (CON and EXA) would be combined into a single CON in the next statement
- Ability to set tone settings by product per VTEC action (NEW, CON, CAN, etc...)
- Addition of "non-routine" broadcast service areas with unique product specific settings to process/don't process and tone/interrupt.
- Default Expiration time can now also be used as a forced override to existing UGC expiration time
- Check for existence of a failed formatter (errorlog.txt file size > 0) and copy failed products and logs to ERROR directory.

- Check for "SPN" as last 3 characters of the AWIPS PIL and change CRS message format from T\_ENG to T\_SPA for Spanish broadcast.
- Fixed Tcl bug (workaround) to allow for more proper formatting of an existing overview section.

Version 0512A Changes:

- Fixed 'periodicity' bug
- Summary files are now stored with time stamps to TEST & DEBUG directories
- Fixed P-VTEC decoder in the /bin/UGC\_VTEC\_Decoder.tcl file to distinguish it from H-VTEC after recent changes
- Cleaned up product.cfg and added remaining products. File now differentiates between VTEC and legacy PILs (lack of period)
- Debug files are now named with the PIL & time stamp to make referencing easier
- Summary messages now include beginning time of event.