Watch, Warning, Advisory Application (WWA)

December 18, 2003

WWA OB3 Users Manual

Office of Science and Technology
Meteorological Development Laboratory
Decision Assistance Branch

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1. GENERAL OVERVIEW

Watch, Warning, Advisory (WWA) is an AWIPS application designed to support mission critical dissemination of National Weather Service (NWS) watch, warning, and advisory forecast products. This manual is intended to deliver an overview of the WWA application as well as configuration steps and user instructions to effectively manage and operate this application. Questions can be addressed to the Meteorological Development Laboratory's (MDL) customer representative listed in section 4.2 or through your regional office.

1.1. WWA Client

The WWA Geographical Viewer, or GeoViewer as it's typically called, along with the WWA Composer and WWA Monitor collectively makeup the primary WWA client interfaces. This section breads down the specifics of each WWA Client interface.

1.1.1. WWA Geographical Viewer (GeoViewer)

The WWA GeoViewer provides selectable county, zone, marine, and fire weather maps to graphically identify areas of interest when generating watch, warning, and advisory products. As a secondary function this interface displays all active watches, warnings, and advisories issued by the local and surrounding WFOs, also known as intersite coordination.

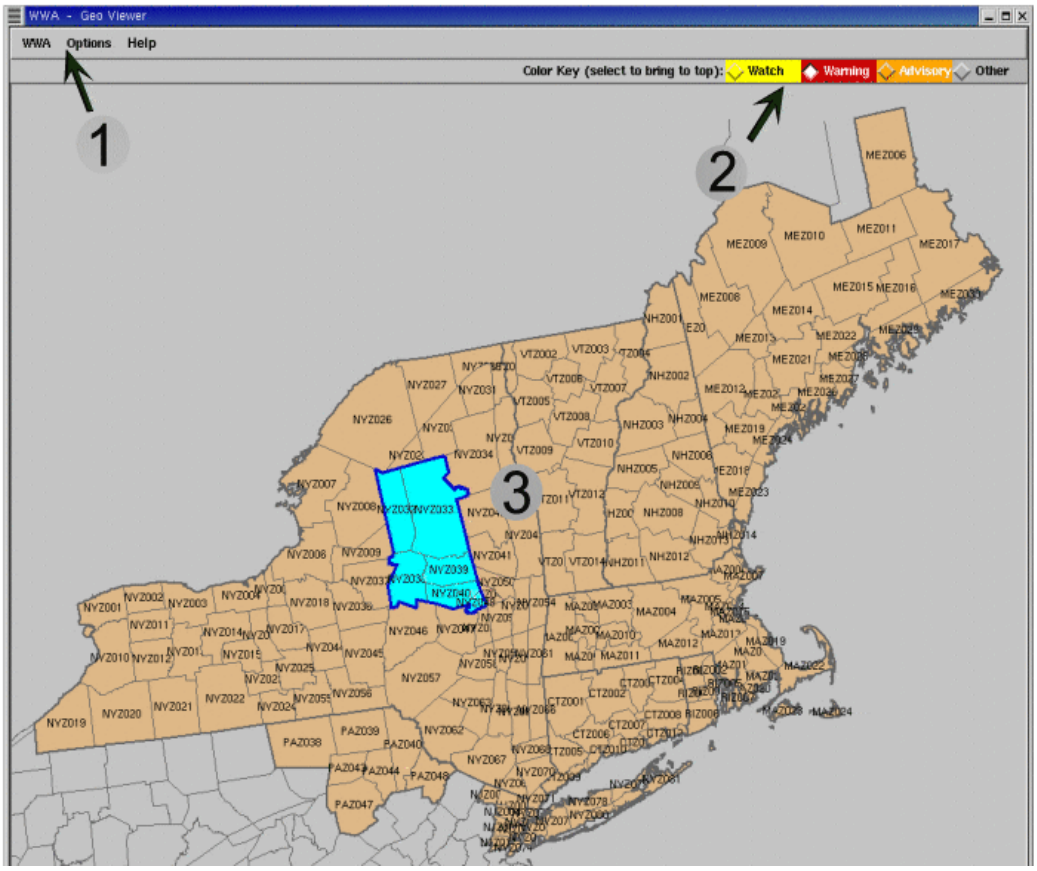

Figure 1 - WWA Geographical Viewer (WWA GeoViewer Interface)

The GeoViewer menu bar options are as follows:

WWA: Contains: *New*, *Monitor*, *Close*, and *Exit,* functions used to manage WWA interfaces.

New: Open the WWA Composer.

Monitor: Open the WWA Monitor.

Close: Close the WWA GeoViewer.

Exit: Exit the WWA application.

Options: Geographical display options.

Zoom in/out: Radio button providing a one level zoom, in and out, from the center point of the displayed map.

Zone, County, Fire Map: Radio button to manually switch between zone, county, and fire weather map backgrounds. During the actual product generation process the correct map background automatically displays based on the selected hazard.

Shifting Outlines: Shift county/zone outlines for multiple hazards.

Topography: Check button to activate/deactivate topographical symbols of local terrain on GeoViewer map.

UGC's: Check button to display UGC values for county map background.

Names: Check button to display zone or county names on associated map background.

Topography Levels: Independent users interface to set local topography levels as needed - See figure 2.

Font: Option to set map font to small, medium, or large.

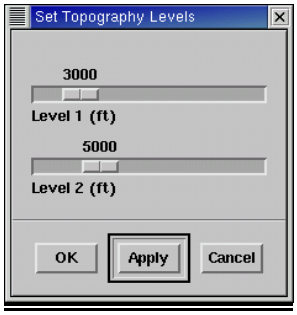

Figure 2 - GeoViewer Topography Levels Interface

Help: Contains Help functions.

Help Menu: Option to launch WWA Online Help guide.

The second identifier in the figure 1 represents watch, warning, advisory, and other filters colored yellow, red, orange, grey respectively. Because multiple WWA products can be active for the same geographical area, this four way toggle was added to help filter active products during complex weather situations. Another filtered display is provided by moving the mouse over a county or zone of interest and then holding the center mouse button down. Doing this will display a list of active products along with the associated expiration times.

Not shown in the GeoViewer example image is the additional popup menu activated with a right mouse click. Options presented from this menu are:

Restore Original Selection: Restore previous zone/county selections from a selected WWA Monitor product.

Select IFPS Zone Forecast Combo: Selects zone/county groups as defined by local IFPS.

Deselect IPFS Zone Forecast Combo: Deselects zone/county groups as defined by local IFPS.

Select Region (<Region>): Selects all zone or county locations of listed region, within valid CWA.

Deselect Region: Deselects all zone or county locations of associated region.

Select Region (<State>): Selects all zone or county locations of listed state, within valid CWA.

Deselect State: Deselects any selected zone or county located in the listed state.

Select All: Selects all zones or counties within WFO CWA.

Deselect All: Deselects any selected zone/county in GeoViewer map.

1.1.2. WWA Composer

The WWA Composer is used to define the mode, hazard type, time fields, free text editing, call-to-action statements and more during the product generation process. This interface breaks down into six major sections as identified in figure 3. The WWA Composer menu bar options are listed below, **black** for active and grey for inactive functions:

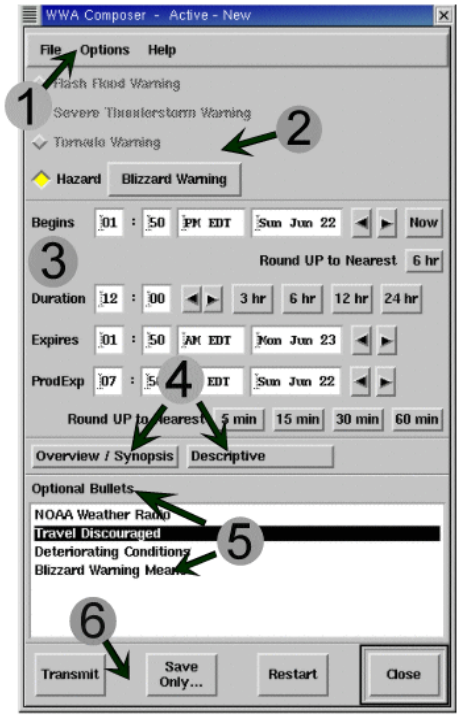

Figure 3 - WWA Composer Interface

File: Contains a *Close* selection to exit the WWA Composer interface.

Options: Menu selection to assist the product generation process.

Forecaster: Selection to launch a list of predefined forecaster identification, which are appended to the end of issued products. Default setting is "off" or no selection.

Headline Editor?: Disabled. Headline changes now made in transmit editor.

Mode: Cascading menu to toggle between *Active*, *Practice*, *Test*, and *Proposed* modes. Each selected state maintains its setting until altered by the forecaster or reset when WWA client is started.

Active: Default and operational setting.

Practice: A function to generate WWA products without actually disseminating publically.

Test: Sets the WWA application to work exactly like the active function with the word "TEST" strategically placed in the final product. Products will disseminate publically.

Proposed: Setting used as an intersite coordination tool. Not used for public dissemination.

Tone Alert: Selection that cascades into a *Yes*, *No*, *Default* toggle where selecting *Yes* will tone alert the generated product on NWR, *No* will not tone alert on NWR, and *Default* will tone based on the CRS configuration setting of the generated product.

Site: Displays id of active site.

Reset: Cascading menu into various reset functions described below.

All: Resets the following: overview/synopsis & descriptive text fields, GeoViewer, time functions, tone alert, bullets, headlines, and hazard menu selections to the default settings.

Times: Resets the beginning, duration, and expiration time fields located on the WWA composer to the default values.

Geography: Resets any selected zone/county fields located in the active GeoViewer map to the default setting.

Bullets: Resets any selected bullets located on the WWA composer interface to the default setting.

Help: Contains Help functions.

Help Menu: Option to launch WWA Online Help guide.

The Composer presents a nationally supported selectable list of hazard types (2) in a drop down menu. This list is nationally supported to ensure database integrity, however local settings of each hazard remains the responsibility of the WFO. For more information on how to configure WWA reference section 2 of this document along with the WWA Admin Users Manual referenced in section 4.3. For a complete list hazard types reference section 1.10.

Generated WWA products require four unique time fields (3) defined by the forecaster during the preparation process. These time fields are:

Begins: Hazard start time. By default the current time.

Duration: Hazard end time. Setting this time field whether through the provided 3hr, 6hr, 12hr, 24hr buttons or through the entry box will automatically adjust the *Expires* and *ProdExp* time fields.

Expires: Forecast end time of hazard

ProdExp: WWA product expiration time. IE, the purge time in the UGC string.

Many NWS products require forecaster free text input consisting of overview/synopsis and/or descriptive text. This dynamic text is entered into appropriate Free Text Editor (FTE) launched from the WWA Composer Overview/Synopsis and Descriptive Text buttons (4). For more information on the FTE or capturing free text reference section 1.1.4. of this document.

Optional Bullets, or commonly addressed as Call-to-Action Statements, are presented to the forecaster in a multi-selectable list box (5). Bullet definitions are retrieved from associated WWA template files predefined by the WWA Administrator.

Finally, the ability to transmit, store, reset, or backout from the WWA composer can be found on the interfaces button bar (6). Four options are provided:

Transmit: Launch WWA transmit editor.

Save Only: Save defined segment to WWA Monitor. Typically done as part of multi-segmented product generation.

Restart: Reset the current WWA Composer & GeoViewer to default settings.

Close: Close the WWA Composer interface.

1.1.3. WWA Monitor

The WWA Monitor is a product tracking tool to manage life cycle states for the local office, and also lists issued products from adjacent WFOs. This interface breaks down into three major sections as shown in figure 4. The menu bar (1) contains the following options:

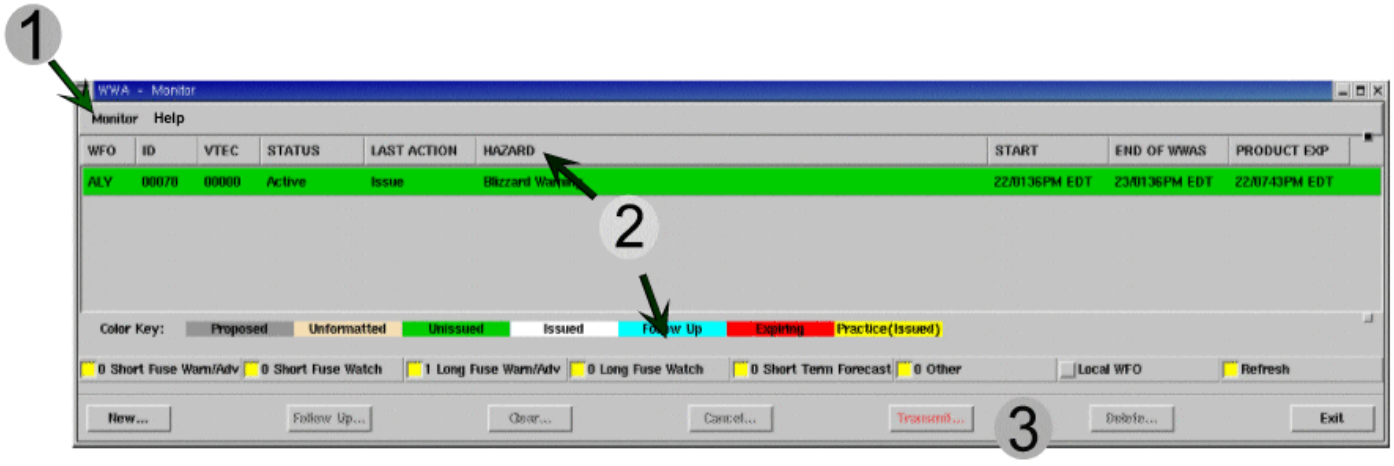

Figure 4 - WWA Monitor Interface

Monitor: Option that contains: *New*, *GeoViewer*, *Close*, and *Exit.*

New: Open the WWA Composer.

GeoViewer: Open the WWA GeoViewer.

Close: Close the WWA Monitor.

Exit: Exit the WWA application.

Help: Contains Help functions.

Help Menu: Option to launch WWA Online Help guide.

The next section (2) provides a titled list box of each product/segment catalogued along with the appropriate color denoting the life cycle state. Selecting each title will sort the listed items by the selected type. Products listed contain the following detail:

WFO: Three letter site id (eg, ALY).

ID: Internal WWA identification number.

VTEC: Valid Time Event Code (VTEC) Event Tracking Number (ETN) number (SPC watch # for WCN, or sequential WFO hazard counter).

STATUS: Current life cycle state of the WWA product.

LAST ACTION: Indicates last product life cycle action of WWA product. Life cycle states include: Proposed, unformatted, unissued, issued, followup, expiring, practice(issued).

HAZARD: Hazard type as selected from the WWA Composer.

START: Hazard start time as defined in the WWA Composer.

END OF WWAS: Product expiration time as defined in the WWA Composer.

PRODUCT EXP: Product purge time for the WWA application as defined in the WWA Composer. This may or may not be the same time as the END OF WWAS field described above.

Hazards listed in the WWA Monitor can be filtered by selecting the following check boxes: Short Fuse Warn/Adv, Short Fuse Watch, Long Fuse Warn/Adv, Long Fuse Watch, Short Term Forecast, Other, Local WFO, Refresh (activate auto refresh option).

The WWA Monitor button bar (3) breaks down as follows:

New...: Open the WWA Composer to begin generation of a new WWA Product. Unhighlighted hazard presents a default WWA Composer. A highlighted item presents a WWA Composer "primed" with the data related to the selected hazard.

Follow up...: Follow up (extension in time, extension in area) issued WWA products.

Clear...: Clear zone or county from an issued WWA product.

Cancel...: Cancel an issued WWA product.

Transmit...: Publically transmit a single (or collective) segment(s) listed in the WWA monitor.

Delete/Restore...: Delete unissued products from the WWA Monitor or revert back to the previously issued state.

Exit: Exit the WWA application.

1.1.4. Capture Text and Free Text Editor

Overview/synopsis and descriptive free text is entered into the provided free text editor (FTE) launched from the WWA Composer. Entering free text through the FTE will allow such text to carry through when performing follow-up, clear, and cancel functions.

When providing overview/synopsis free text for multi-segmented products, like a winter storm warning (WSW) that could contain a winter weather advisory and heavy snow warning, only a single overview/synopsis is needed in the final WSW. Because of this, the overview/synopsis FTE will remain the same for each segment created while the Composer remains open. In the event that segments are collected in the WWA Monitor after the WWA Composer window has closed, the overview/synopsis section of the first selected segment prior to transmitting will be captured in the final product.

Finally, the FTE used for capturing free text input does not contain a spell check function, although this is offered in the final transmit editor described in the next section.

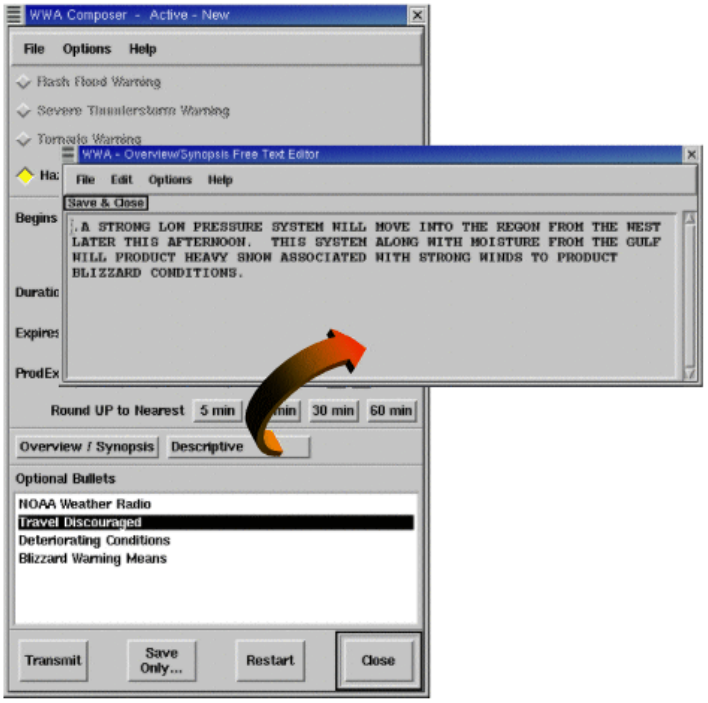

Figure 5 - Free Text Editor (FTE) launched from WWA Composer

1.1.5. Transmit Capability

The WWA transmit interface was upgraded to allow editing of the final product. This new "transmit editor" contains full editor capabilities including copy, cut, paste, search, unlimited undo, and spell check. Three independent status bars along the bottom of the interface were also provided to display information such as the Active, Test, or Practice mode; the AWIPS key name (eg, WBCWSWLWX), and other functional information. Finally, the ability to transmit directly from WWA is accommodated by using AWIPS handleOUP.pl.

The following bullets highlight additional information on the new transmit editor:

- Formatting the initial WCN product will not use the transmit function, and therefore the text workstation will continue as the means of disseminating initial WCN products.

- handleOUP.pl uses the afos2awips.txt (a2a) file to determine product routing information and therefore it is extremely important that sites maintain an accurate and up to date a2a file to transmit products publically.

- A limitation built into the transmit editor prohibits multiple editors "of like products" (WSW, NPW etc...) from being active at one time. This is done to protect the WWA database from data corruption.

- Transmitted products are addressed to "ALL", under the associated pil and also to WWAWRKWWA. In practice mode products are only stored locally to the work pil.

- There is no longer a "virtual editor" or "headline editor". Associated changes are now made in the new transmit editor.

- Although the entire generated product is open for editing, HQ policy only allows editing of the *headline, overview/synopsis, and descriptive text fields.

- Changes made in the transmit editor will be contained in the issued product, however these changes are not saved to the WWA database. As a result, such changes will not be reflected in follow up, clear, or cancel messages. Use FTE.

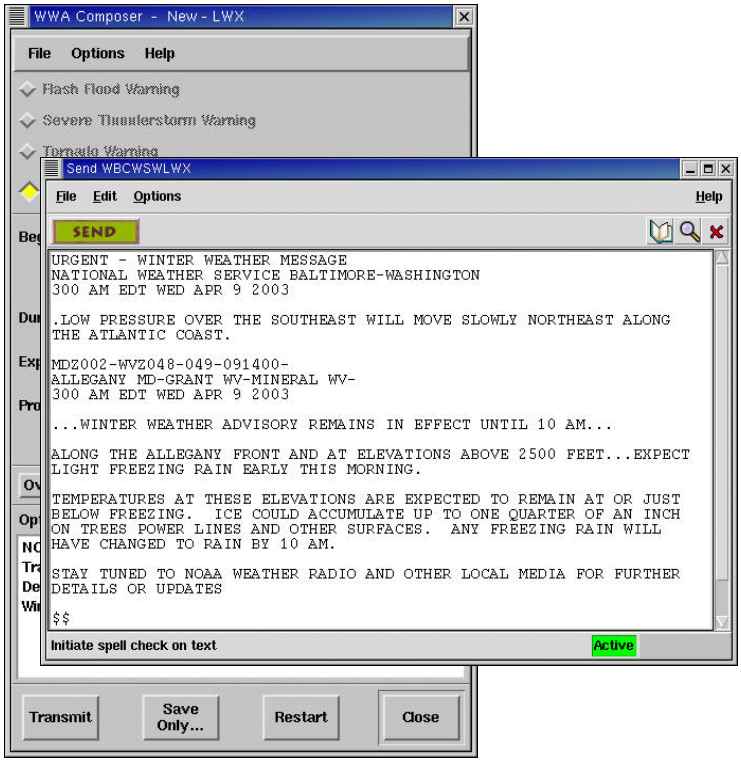

Figure 6 - WWA Transmit Editor launched from WWA Composer

*For undefined policy or meteorological content, not for personal preferences (section 1.4.2.). Eg. "Snow Heights above 5000 ft". For questions contact your regional representative.

1.1.6. Online Help

WWA OB3 contains online step-by-step, or "cookbook", style instructions describing how to create different watch, warning, advisory, and statement products. This first version of the WWA Online Help application uses a drop down menu to select the desired instruction and is launched under *Help* on the menu bar.

In a similar fashion the WWA Admin application provides online help accessible by selecting *Help*, then *Online Help* from the WWA Admin menu bar. This PDF help guide provides hyperlinks from the table of contents to the desired section of the manual.

Figure 7 - WWA Online Help Interface

1.2. WWA Administrative (Admin) Application

A WWA administrative application, commonly called WWA Admin, has been provided to assist WWA administrators in configuring the WWA tool. Instructions on how to configure WWA can be found in section 2 of this document, however detail information about the WWA Admin application can be found in the associated users manual referenced in section 4.3.

1.3. NOAA Weather Radio (NWR) CRS product formatting

The WWA application does support automated CRS product formatting for NWR broadcasts. There are two ways WWA products are formatted for weather radio: 1) for broadcast over locally controlled NWR towers within the site's CWA and 2) for broadcast over NWR towers controlled by another WFO for broadcast over

the issuance sites CWA. Also, WarnGen NWR formatting is leveraged from the WWA application through the use of the AUX_INFO field definition in WarnGen template files. This section provides an overview of the described NWR capability and configuration steps are located section 2.4 of this document.

1.3.1 Defining the CRS message type

WWA NWR formatted products are delivered directly, or indirectly through the NWR Browser, to CRS. In either case WWA uses a specific message type schema to deliver these broadcast ready files as described below:

Long Fused Messages:
Long fused WWA CRS messages take the form of CCCcatNW*, where *CCC* is the site id of the issuance site, *cat* is the hazard category name, and * is the NWR transmitter number. The transmitter number is determined by the order this was defined in the WWA Admin application *(nwr_twrs* order number in the *geography_groups* informix database table).

These message types must be defined in CRS message suites specific to each NWR transmitter broadcast program for which they are valid.

CCCcatNW* = long fuse message
* = the NWR transmitter number

Example 1:
AFOS Site ID of issuing office = GRR
AFOS Node ID of GRR = ARB
site adjacent to GRR = DTX

ARBWSWGRR - actual winter storm warning disseminated
GRRWSWNW1 - actual NWR message created by GRR
GRRWSWNW1 - NWR message received at the adjacent site DTX

Had DTX created the winter storm watch, the message type received from DTX would appear in GRR's CRS formatted product header as:

DTXWSWNW1 - NWR message received **from** adjacent site DTX

and in the NWR browser the message type will be displayed as:

DTXWSWNW1_(MRD#) - NWR message received **from** adjacent site DTX

Example 2 (Long fused Winter Storm Warning CRS product name):
PBZWSWNW3 (WSW issued by PBZ for PBZ CRS tower #3)
ILNWSWNW3 (WSW issued by ILN for PBZ CRS tower #3)
RLXWSWNW3 (WSW issued by RLX for PBZ CRS tower #3)

Note: PBZ's tower number 3 broadcasts warnings issued by WFO's PBZ, ILN and RLX. Tower numbers are defined in WWA locally by the WFO in control of the tower, not by the issuing office.

Short Fused Messages:
Short fused WWA CRS messages (Severe Thunderstorm, Tornado and Flash Flood Warnings) will have the form CCCcatXXX, where *CCC* is the site id of the issuance site, *cat* is the category name, and *XXX* is the local site id of who controls the NWR transmitter. These messages are not transmitter specific and rely on the CRS to play them according to the LAC (Local Area Codes), UGCs embedded in the CRS header. These message types must be defined in CRS message suites specific for each NWR transmitter broadcast program for which they are valid.

CCCcatXXX = short fused message
XXX = local site

Example 1:
AFOS Site ID of issuing office = GRR
AFOS node ID of GRR = ARB
site adjacent to GRR = DTX

ARBTORGRR - actual tornado warning disseminated
GRRTORGRR - actual NWR message created by GRR
GRRTORDTX - NWR message created by GRR, **received** at DTX

Had DTX created the tornado warning, the message received from DTX would appear in GRR's CRS formatted product header as:

DTXTORGRR - NWR message received from DTX

and in the NWR browser the message type will be displayed as:

DTXTORGRR_(MRD#) - NWR message received from DTX

Example 2 (Short fused Severe thunderstorm warning CRS product name):
PBZSVRPBZ (SVR issued by PBZ for PBZ CRS towers)
ILNSVRPBZ (SVR issued by ILN for PBZ CRS towers)
RLXSVRPBZ (SVR issued by RLX for PBZ CRS towers)

Note: PBZ's tower number 3 broadcasts warnings issued by WFO's PBZ, ILN and RLX.

Summary Messages:
Summary message types have the form CCCSUMNW*, where CCC is the AFOS Node ID of the local wfo, SUM is the pil category for a summary product, and * is the NWR transmitter number.

CCCSUMNW* = summary product
* = the NWR transmitter

The simple solution for this is to add a message type that contains the CCC of all your adjacent sites that broadcast on your local towers. So for example if site GRR broadcasts products for adjacent site DTX the following message type would need to be added to the CRS database (assuming tower 1 is the correct tower reaching into DTX's area of responsibility):

DTXSUMNW1 - Summary product sent by DTX
GRRSUMNW1 - Summary product for local site, GRR for this example

1.3.2. Summary Products

The concept of the WWA NWR summary product is that a warning will broadcast once and the shorter summary product is generated to play on successive broadcasts instead of the warning. If an additional warning is generated, a new summary product is generated to include both warnings. Because the summary product is in a higher suite, the new warning will not play in its suite. However, as long as the warning product is sent as an interrupt message, it will always play once as an interrupt, regardless of whether it will play in the suite. So if you want to use the summary product feature, you must set up those warnings that are summarized as interrupt messages. The summary product should not be set up as an interrupt. The following procedural example may be instructive. Please note that warnings are used in the following example. The summary product concept can apply equally well to other products such as WSW and NPW in which case it may not be appropriate to have the interrupt set for these product types. This means that new products will not play before they are summarized.

1. A site issues a tornado warning for transmitter 1.

2. The tornado warning message is generated and sent to CRS.

3. The summary message is generated and sent to CRS.

4. CRS broadcasts the tornado warning message once as an interrupt message. While it is being broadcast, CRS is doing its scheduling - the tornado warning triggers the warning suite, but before the tornado warning can broadcast a second time, the summary product triggers the summary suite. Because the summary suite is the higher priority suite, it becomes the active schedule.

5. CRS continues broadcasting the summary message.

6. The site issues a severe thunderstorm warning for transmitter 1.

7. The severe thunderstorm warning message is generated and sent to CRS.

8. The summary message is generated which includes the information for both the tornado and severe thunderstorm warnings.

9. CRS broadcasts the severe thunderstorm warning message once as an interrupt message. While it is being broadcast, CRS is doing its scheduling - the severe thunderstorm warning is added to the warning suite schedule, and the new summary message replaces the old summary message in the summary suite schedule, which remains the active schedule.

10. CRS continues to broadcast the new summary message until it expires. The expiration time of the summary message is the earliest expiration time of the summarized products.

11. The active schedule drops down to the next priority suite, which is the warning suite. If any of the two warnings are still in effect, they will broadcast. When they expire, the active schedule will drop down again.

1.4. Template Files

WarnGen, WWA, and the WWA NWR functionality use template file output by localization into $FXA_LOCALIZATION_ROOT/$FXA_LOCAL_SITE to format products. Typically WWA template start with "WWA", wwa_nwr templates start with "nwr", and WarnGen templates start with "wwa". Changes can be made to the text templates, but always change the pre template files (*.preWWA) and move the files from /awips/fxa/data/localization/nationalData to /data/fxa/customFiles (this will prevent local changes from being overwritten during installs and allow the changes to be seen from all workstations). If changes are made to existing WWA template files a WWA localization must be run on each workstation and for NWR template file changes a WWA localization on the ds machine is necessary as described in section 2.6.

There are text template files for each segmented and non-segmented product. Each template file contains life cycle bullets and calls to action (CTA) necessary for the specific hazard. Special substitutions are also made with statements formatted within the template with less than/greater than brackets. The most common type is an area substitution such as <AREA| file=wwa_zones| format=ugc>, which in this case, would print out the zones of the current hazard in an UGC format. C-type include statements can also be used within text template files. The line #include "sls_county_list.template" will include the text found in the sls_county_list.template file. Substitutions can also be handled within included text.

Bullets :

All template files includes a series of life cycle bullets. These bullets are called "hazard headline", "hazard clear", "hazard cancel", "hazard expansion", and "hazard extension". When the text is created for a particular product, its life cycle determines which bullet is used as text output. For example, if we follow-up a product and extend its expiration time, then WWA will grab the text in the "hazard extension" bullet. Also you will find, as stated above, bullets can have special substitutions. The extension bullet might have the following line: Watch extended until <EXPIRE| local>. When formatted by WWA, the output text will read "Watch extended until 900 PM EDT". The EXPIRE statement was substituted by the actual new expiration time of the product.

Segmented Template File Example:

```
//"Winter Storm Warning"
#include "${CURRENT_CWA}-offtIncl.txt"

^{nws header |
ZCZC $$cccValue!WSW$$xxxValue! DEF&
TTAA00 KIND <NOW | ddhhmm | gmt>&&

URGENT - WINTER WEATHER MESSAGE&
#include "${CURRENT_CWA}-headerIncl.txt"
<NOW | header | local >&&

...optional headline...&&

.optional overview...&

}^

^{hazard headline |
...WINTER STORM WARNING <PHRASE|warningAdvisory> ...
}^

!{hazard continue |
...WINTER STORM WARNING <PHRASE|warningAdvisory> ...
}!

!{hazard clear |
...WINTER STORM WARNING IS NO LONGER IN EFFECT...
}!

!{hazard cancel |
...WINTER STORM WARNING IS CANCELLED...
}!

!{hazard expansion |
...WINTER STORM WARNING HAS BEEN EXPANDED...
}!

!{hazard extension |
...WINTER STORM WARNING HAS BEEN EXTENDED UNTIL <EXPIRE | plain>...
}!

{NOAA Weather Radio |
Stay tuned to NOAA Weather Radio and other local media for further details or updates.&
}

{Travel Discouraged |
Any travel is strongly discouraged.  If you leave the safety of being indoors...you are
putting your life at risk.&
}

{Deteriorating Conditions |
Conditions can deteriorate rapidly in winter weather situations...slow down and allow extra
time when travelling.  Practice your winter safety rules...keep an extra
flashlight...food...and water in your car in case of emergency.&
}

{b/4 event...Winter Storm Warning Means |
A Winter Storm Warning means severe winter weather conditions are imminent or highly likely.&
}
```

Non-segmented Template File Example:

```
//"SLS Severe Thunderstorm Watch"

^{issuance header |
#include "${CURRENT_CWA}-offtIncl.txt"
ZCZC CCCNNNXXX DEF&
TTAA00 KEAX <NOW | ddhhmm | gmt>&&

BULLETIN - IMMEDIATE BROADCAST REQUESTED&
AREAL OUTLINE FOR SEVERE THUNDERSTORM WATCH NUMBER $$watchNumber!&
#include "${CURRENT_CWA}-headerIncl.txt"
<NOW | header | local >&
< PURGE |ddhhmm |gmt |last_table |trail=-& |var=expireTime >
}^

!{followup/clear/cancel header |
#include "${CURRENT_CWA}-offtIncl.txt"
ZCZC $$cccValue!SPS$$xxxValue! DEF&
TTAA00 KEAX <NOW | ddhhmm | gmt>&
<AREA |file=wwa_zones | output_field=2 | format=ugc >
< PURGE |ddhhmm |gmt |interval=15>-&&

SPECIAL WEATHER STATEMENT&
#include "${CURRENT_CWA}-headerIncl.txt"
<NOW | header | local >&
< PURGE |ddhhmm |gmt |last_table |trail=-& |var=expireTime >
}!

^{hazard headline |
SEVERE THUNDERSTORM WATCH NUMBER $$watchNumber! IN EFFECT UNTIL <EXPIRE>.&&
#include "sls_county_list.template"
}^

!{hazard continue |
SEVERE THUNDERSTORM WATCH #$$watchNumber! REMAINS IN EFFECT FOR...
<AREA |file=wwa_zones |output_field=1 |format=list
      |trail=~[2,counties_type]...&>
}!

!{hazard clear |
SEVERE THUNDERSTORM WATCH #$$watchNumber! HAS BEEN REMOVED FROM THE FOLLOWING AREAS...
<AREA |file=wwa_zones |output_field=1 |format=list |trail=...&>
}!

!{hazard cancel |
SEVERE THUNDERSTORM WATCH #$$watchNumber! THAT WAS IN EFFECT FOR...
<AREA |file=wwa_zones |output_field=1 |format=list
      |trail=~[2,counties_type]...> HAS BEEN CANCELLED.
}!

!{hazard expansion |
SEVERE THUNDERSTORM WATCH #$$watchNumber! HAS BEEN EXPANDED TO INCLUDE THE FOLLOWING AREAS...
<AREA |file=wwa_zones |output_field=1 |format=list |trail=...&>
}!

!{hazard extension |
SEVERE THUNDERSTORM WATCH #$$watchNumber! VALID FOR THE AREAS OF...
<AREA |file=wwa_zones |output_field=1 |format=list |trail=...> HAS BEEN EXTENDED UNTIL <EXPIRE
| plain>
}!
```

1.4.1. Template File Changes From AWIPS Build OB2

The WWA Admin application will replace the wwa_setup program removed during the OB3 install. WWA Admin will only support template file name changes through OB4, after which national template file names will become the standard. Because of this sites need to verify these national names are used in the configuration process before OB5 is delivered. To ensure your site conforms to the national standard reference section 1.10. of this document.

New WWA and WWA NWR template files will be uploaded into the *nationalData* directory during the OB3 install. These templates were provided because they were previously missing, did not comply with national policy standard 10-1701, or to provide framing for CEM type templates. Because of this it may not be necessary to merge any changes based on the national files if your custom template files already comply with 10-1701 and missing templates were created locally.

New NWR Template Files:

nwr_urban_wrn.preWWA
nwr_dlyfrcst.preWWA
nwr_rvrlk_sum.preWWA
nwr_drought_stmt.preWWA
nwr_flood_adv.preWWA
nwr_hydro_outlk.preWWA
nwr_flood_stmt.preWWA
nwr_hydro_sum.preWWA
nwr_minor_fld.preWWA
nwr_rvrice_stmt.preWWA
nwr_rvrrec_stmt.preWWA
nwr_river_sum.preWWA
nwr_spcrvr_stmt.preWWA
nwr_urban_adv.preWWA
nwr_wintspr_fld.preWWA
nwr_water_supply.preWWA
nwr_lake_eff_wat.preWWA
nwr_blizzard_wat.preWWA
nwr_extcold_wat.preWWA
nwr_lake_eff_wrn.preWWA
nwr_extcold_wrn.preWWA
nwr_lake_eff_adv.preWWA
nwr_snow_blosn.preWWA
nwr_winwea_adv.preWWA
nwr_ww_outlk.preWWA
nwr_extcold_outlk.preWWA
nwr_winstrm_sum.preWWA
nwr_extheat_wat.preWWA
nwr_ffld_stmt.preWWA
nwr_frostfrz_wat.preWWA
nwr_frzfog_adv.preWWA
nwr_frost_adv.preWWA
nwr_heat_adv.preWWA
nwr_lake_wind_adv.preWWA
nwr_heat_outlook.preWWA
nwr_hiwinds_outlk.preWWA
nwr_nonhazard_outlk.preWWA
nwr_specialstmt.preWWA
nwr_wndchil_outlk.preWWA
nwr_svrt_wat_sls.preWWA
nwr_tor_wat_sls.preWWA
nwr_svrt_wat_wcn.preWWA
nwr_tor_wat_wcn.preWWA
nwr_severe_outlook.preWWA
nwr_severe_stmt.preWWA
nwr_coast_fld_wat.preWWA
nwr_lakesh_fld_wat.preWWA
nwr_coast_fld_wrn.preWWA
nwr_lakesh_fld_wrn.preWWA
nwr_spec_mar_wrn.preWWA
nwr_coast_fld_stmt.preWWA
nwr_lakesh_fld_stmt.preWWA
nwr_mw_stmt.preWWA
nwr_redflag_wat.preWWA
nwr_redflag_wrn.preWWA
nwr_fire_dan.preWWA
nwr_avail_wrn.preWWA
nwr_wndchil_wat.preWWA
nwr_aval_wat.preWWA
nwr_volcano_wrn.preWWA
nwr_shelterinplace_wrn.preWWA
nwr_radiological_wrn.preWWA
nwr_nucpowerplant_wrn.preWWA
nwr_lawenforce_wrn.preWWA
nwr_hazmat_wrn.preWWA
nwr_fire_wrn.preWWA
nwr_quake_wrn.preWWA
nwr_civildan_wrn.preWWA
nwr_aval_adv.preWWA
nwr_air_stag.preWWA
nwr_civil_mes.preWWA
nwr_earthqk_rep.preWWA
nwr_oth_prods.preWWA
nwr_evacuation.preWWA
nwr_networknotify.preWWA
nwr_911outage.preWWA
nwr_locareaem.preWWA
nwr_childabduction.preWWA
nwr_airwx_wrn.preWWA
nwr_hurr_wind_wat.preWWA
nwr_tropstrom_wat.preWWA
nwr_hurr_wind_wrn.preWWA
nwr_tropstrom_wrn.preWWA
nwr_hurricane_stmt.preWWA
nwr_tropstrom_rep.preWWA
nwr_frostfrz_outlk.preWWA
nwr_avail_wrn.preWWA

New WWA Template Files:

WWA_blizzard_wat.preWWA
WWA_extcold_wat.preWWA
WWA_extcold_wrn.preWWA
WWA_extcold_outlk.preWWA
WWA_aval_wat.preWWA
WWA_volcano_wrn.preWWA
WWA_shelterinplace_wrn.preWWA
WWA_radiological_wrn.preWWA
WWA_nucpowerplant_wrn.preWWA
WWA_lawenforce_wrn.preWWA
WWA_hazmat_wrn.preWWA
WWA_fire_wrn.preWWA
WWA_quake_wrn.preWWA
WWA_civildan_wrn.preWWA
WWA_evacuation.preWWA
WWA_networknotify.preWWA
WWA_911outage.preWWA
WWA_locareaem.preWWA
WWA_childabduction.preWWA

Sites may wish to consider merging in "framing" fields added to nationalData CEM template files:

WWA_911outage.preWWA
WWA_civildan_wrn.preWWA
WWA_fire_wrn.preWWA
WWA_locareaem.preWWA
WWA_quake_wrn.preWWA
WWA_volcano_wrn.preWWA
WWA_childabduction.preWWA
WWA_earthqk_rep.preWWA
WWA_hazmat_wrn.preWWA
WWA_networknotify.preWWA
WWA_radiological_wrn.preWWA
WWA_civil_mes.preWWA
WWA_evacuation.preWWA
WWA_lawenforce_wrn.preWWA
WWA_nucpowerplant_wrn.preWWA
WWA_shelterinplace_wrn.preWWA

This "framing" will prompt forecasters to edit MND header fields with the required information needed in these product types. Prompts are surrounded by !** **! which are also error checked before transmitting - see example below.

Text Template Fields (911 telephone outage example):

```
!** PUT BROADCAST ACTION HERE - CONSULT SDM **!&
911 TELEPHONE OUTAGE EMERGENCY
!** PUT ISSUE AGENCY HERE **!&
RELAYED BY~
#include "${CURRENT_CWA}-headerIncl.txt"
<NOW | header | local >&
```

Generated Text:

```
!** PUT BROADCAST ACTION HERE - CONSULT SDM **!
911 TELEPHONE OUTAGE EMERGENCY
!** PUT ISSUE AGENCY HERE **!
RELAYED BY NATIONAL WEATHER SERVICE BALTIMORE-WASHINGTON
1130 AM EDT WED SEP 2003
```

1.4.2. Headline Time Phrases for Long Duration Warnings and Advisories

- Issuance Time and Event Start Time on the Same Calendar Day

➘ General Usage: When the issuance time and event time occur on the same calendar day, the WWA warning and advisory headline will include the time phrases listed in the following table:

Same Calendar Day Time Phrase	Time Period Covered
Early This Morning	Midnight - 5:59 AM
This Morning	6 AM - 11:59 AM
This Afternoon	Noon - 5:59 PM
This Evening	6 PM - 11:59 PM

Example:
Issuance Time - 4 AM Tuesday
Event Start Time - 7 AM Tuesday
Event End Time - 11 AM Wednesday

WWA Headline:
...HEAVY SNOW WARNING IN EFFECT FROM 7AM **THIS MORNING** TO 11 AM EST WEDNESDAY...

➘ Special Case 1: Similar Time Phrase for the Start and End Times. If the start and end time use the same time phrase, then only one time phrase will be used and it will be placed after the end time.

Example:
Issuance Time - 10 AM Tuesday
Event Start Time - 1 PM Tuesday
Event End Time - 5 PM Tuesday

WWA Headline:
...HIGH WIND WARNING IN EFFECT FROM 1 PM TO 5PM MDT **THIS AFTERNOON**...

➘ Special Case 2: If the start time and end time use "Early This Morning" and "This Morning," then place the time phrase "This Morning" after the end time ONLY.

Example:
Issuance Time - 1 AM Tuesday
Event Start Time - 4 AM Tuesday
Event End Time - 9 AM Tuesday

WWA Headline:
...SNOW ADVISORY IN EFFECT FROM 4 AM TO 9 AM CST **THIS MORNING**...

- Issuance Time and Event Start Time on Different Calendar Days:

↘ General Usage: When the issuance time and event start time occur on different calendar days, the WWA warning and advisory headline will include the time and day the product is in effect for.

Example:
Issuance Time - 3 PM Tuesday
Event Start Time - 5 AM Wednesday
Event End Time - 5 AM Thursday

WWA Headline:
...ICE STORM WARNING IN EFFECT FROM 5 AM WEDNESDAY TO 5 AM EST THURSDAY...

↘ Special Case 1: If the event start time and end time occur on the same day, then the day phrase will be used after the event end time only.

Example:
Issuance Time - 10 PM Tuesday
Event Start Time - 5 AM Wednesday
Event End Time - 5 PM Wednesday

WWA Headline:
...LAKE EFFECT SNOW WARNING IN EFFECT FROM 5 AM TO 5 PM CST WEDNESDAY...

- Issuance Time = Event Start Time

↘ General Usage: When the issuance time and event start time occur simultaneously, the WWA warning and advisory headline will only include the event end time in the headline.

↘ Special Case 1: If the event end time occurs on the same calendar day as the issuance time, then use the same calendar rules for the end time phrase set in the above table.

Example:
Issuance Time - 4 AM Tuesday
Event Start Time - 4 AM Tuesday
Event End Time - 8 PM Tuesday

WWA Headline:
...SNOW ADVISORY IN EFFECT UNTIL 8 PM PST THIS EVENING...

↘ Special Case 2: If the event end time occurs on a different day than the issuance time, then the day phrase will be used after the event end time.

Example:
Issuance Time - 4 PM Tuesday
Event Start Time - 4 PM Tuesday
Event End Time - 2 AM Wednesday

WWA Headline:
...WINTER STORM WARNING IN EFFECT UNTIL 2 AM CST WEDNESDAY...

➘ Special Case 3: If the event start time < issuance time + 3 hours, then only include the event end time in the headline.

Example:
Issuance Time - 10:15 PM Tuesday
Event Start Time - 1 AM Wednesday
Event End Time - 10 AM Wednesday

WWA Headline:
...DENSE FOG ADVISORY IN EFFECT UNTIL 10 AM EST WEDNESDAY...

- Time Zone Indicators:

➘ General Usage: The long duration WSW/NPW warning and advisory headline will include a time zone indicator after the specific time. If two times are listed, the time zone indicator will be listed after the second time.

➘ Zone Grouping with Two or More Time Zones: If the zone grouping includes more than one zone, then the additional time zones(s) will be placed in parentheses next to all time indicators.

WWA Headline:
...HEAVY SNOW WARNING IN EFFECT FROM 3 AM EDT (2 AM EST) (2PM CDT) TO 10 AM EDT (9 AM EST) (9 AM CDT) THIS MORNING...

WWA Headline:
...SNOW ADVISORY IN EFFECT UNTIL 8PM PST (S PM MST) TONIGHT...

➘ Warnings and Advisories Issued by Guam. Any long duration warnings and advisories issued by Guam will use "GUAM LST" for the time zone indicator.

WWA Headline:
...HIGH WIND WARNING IN EFFECT UNTIL 3 AM GUAM LST WEDNESDAY...

1.4.3. Headline Time Phrases for Long Duration Watches

The long duration WSW/NPW watch headline created in WWA will include a general time phrase and the day the watch is in effect for.

Same Calendar Day Time Phrase	Day +1 Calendar Day Time Phrase	Day +2 Calendar Day Time Phrase	Time Period Covered
	Late Tonight	Late(day+1) Night	Midnight - 5:59 AM
	(Day + 1) Afternoon	(day + 2) Morning	6 AM - 11:59 AM
This Afternoon	(day + 1) Afternoon	(day + 2) Afternoon	Noon - 5:59 PM
This Evening	(day + 1) Evening	(day + 2) Evening	6 PM - 11:59 PM

- Issuance Time and Event Start Time on the same Calendar day

➘ General Usage: When the issuance time and event start time occur on the same calendar day, the WWA watch headline will include the time phrases listed in the above table.

Example:
Issuance Time - 4 AM Tuesday
Event Start Time - 8 PM Tuesday
Event End Time - 4 PM Wednesday

WWA Headline:
...WINTER STORM WATCH IN EFFECT FROM THIS EVENING TO WEDNESDAY AFTERNOON...

➘ Special Case: Similar Time Phrase for the start and end times. If the start and end time use the same time phrase, then only one time phrase will be used and it will be placed after the end time.

Example:
Issuance Time - 4 AM Tuesday
Event Start Time - 6 PM Tuesday
Event End Time - 11 PM Tuesday

WWA Headline:
...HIGH WIND WATCH IN EFFECT THIS EVENING...

- Issuance Time and Event Start Time are on Different Calendar Days

➘ General Usage: When the issuance time and event start time occur on different calendar days, the WWA warning and advisory headline will include the time phrase and the product is in effect for.

Example 1:
Issuance Time - 3 PM Tuesday
Event Start Time - 5 AM Wednesday
Event End Time - 5 AM Thursday

WWA Headline:
...WINTER STORM WATCH IN EFFECT FROM LATE TONIGHT TO LATE WEDNESDAY NIGHT...

Example 2:
Issuance Time - 4 AM Tuesday
Event Start Time - 6 AM Wednesday
Event End Time - 5 PM Thursday

WWA Headline:
...LAKE EFFECT SNOW WATCH IN EFFECT FROM WEDNESDAY MORNING TO THURSDAY AFTERNOON...

1.5. Operational Modes

WWA supports four separate modes: active, test, practice, and proposed:

Active Mode:
Active mode is the operational mode used to publically issue WWA generated watch, warning, and advisory products.

Test Mode:
Test mode was designed to act as close to active mode as possible with the exception of the word "TEST" strategically placed in the final product - See figure 9. In other words, products generated in test mode will disseminate publically, will format NWR products if set as active, and will utilize intersite coordination.

Practice Mode:
Practice mode works much differently than either test or active. In short, generating and transmitting practice products will store locally at WWAWRKWWA and not disseminate publically, will override NWR formatting and send CRS formatted products to the NWR

NATIONAL WEATHER SERVICE NORTHERN INDIANA
1000 AM EST TUE MAR 26 2002

.TEST TEST TEST, THIS IS ONLY A TEST. THIS IS NOT AN ACTIVE SEVERE WEATHER STATEMENT. LOW PRESSURE OVER SOUTH CENTRAL INDIANA WILL TRACK NORTHEAST INTO NORTH CENTRAL OHIO LATE THIS AFTERNOON. THIS TRACK WILL BRING A MIX OF WINTER WEATHER TO NORTHWEST OHIO AND NORTHERN INDIANA.

A MIX OF SNOW/SLEET/FREEZING RAIN WILL CONTINUE TO CAUSE SLICK ROADWAYS AND SIDEWALKS. TAKE EXTRA CAUTION WHILE TRAVELING AND ALLOW MORE TIME TO REACH YOUR DESTINATION.

STAY TUNED TO NOAA WEATHER RADIO AND OTHER LOCAL MEDIA FOR FURTHER DETAILS OR UPDATES.

INZ008-009-013-015>018-020-022>025-OHZ001-002-004-005-015-016-262100-
ALLEN IN-CASS IN-DE KALB IN-DEFIANCE OH-FULTON OH-FULTON IN-HENRY OH-
HUNTINGTON IN-KOSCIUSKO IN-MIAMI IN-NOBLE IN-PAULDING OH-PULASKI IN-
PUTNAM OH-WABASH IN-WHITE IN-WHITLEY IN-WILLIAMS OH-
INCLUDING THE CITIES OF...ARCHBOLD...AUBURN...BRYAN...BUTLER...
COLUMBIA CITY...DEFIANCE...FORT WAYNE...GARRETT...GRISSOM AFB...
HICKSVILLE...HUNTINGTON...KENDALLVILLE...LIGONIER...LOGANSPORT...
MONTICELLO...MONTPELIER...NAPOLEON...NEW HAVEN...NORTH MANCHESTER...
OTTAWA...PERU...ROCHESTER...SWANTON...SYRACUSE...TRI-LAKES...
WABASH...WARSAW...WAUSEON...WINAMAC AND WINONA LAKE
1018 AM EST TUE MAR 26 2002

...TEST WINTER WEATHER ADVISORY IN EFFECT FROM 10 AM THIS MORNING TO 11 AM EST WEDNESDAY TEST...

TEST TEST TEST, THIS IS ONLY A TEST. THIS IS NOT AN ACTIVE SEVERE WEATHER STATEMENT.

SNOW WILL CONTINUE INTO THE AFTERNOON HOURS...THEN BEGIN TO DIMINISH IN INTENSITY. THE SNOW MAY BE MIXED AT TIMES WITH SLEET. THE HEAVIEST SNOW WILL FALL ALONG A LOGANSPORT TO COLUMBIA CITY TO AUBURN LINE WHERE 5 INCHES OF SNOW IS EXPECTED. ELSEWHERE...3 TO 5 INCHES OF SNOW IS FORECAST.

Figure 8 - Test & Practice product example

browser, and will not utilize intersite coordination. However, the ability to follow-up, clear, and cancel is preserved, and similar to test mode, text will have "TEST" strategically placed in the final product. The idea behind practice mode is to provide a working WWA that will not disseminate products publically.

Proposed Mode:
This setting is used for internal coordination only. Products generated while in proposed mode will not disseminate publically, but are transmitted through the WWA intersite coordination function for coordination with adjacent WFOs. When used, generated products will display on the issuance sites GeoViewer as well as on the GeoViewer of defined adjacent sites.

1.6. Upgrade/Downgrade/Replace Functionality

The upgrade/downgrade/replace functionality is now supported for multi-segmented products. Logic for this function is built into the WWA software which automatically recognizes an upgrade, downgrade, or replacement for WSW, NPW, and RFW products. Forecasters validate prompted upgrade/downgrade/replace actions by selecting "yes" from the provided message box to which WWA will generate the appropriate text and associated VTEC string. Finally, this function will automatically become active during the OB3 install process; however, an on/off toggle does exist in the WWA Administration (Admin) application.

Multiple Segment Upgrade Example:

1. A forecaster issues a Winter Storm Watch for an area (zones A, B, C, D).
2. It is later decided that zone A should be a Blizzard Warning, zone B should be a Winter Weather Advisory, zone C should be Winter Storm Warning, and zone D remains a Watch.
3. Create the Blizzard Warning, highlight zone A on Geo-Viewer, and select "Save Only".
4. A prompt box will display asking if this upgrades the existing watch. Select "Yes".
5. Repeat step 3 for the Winter Weather Advisory for zone B and Winter Storm Warning for zone C.
6. Highlight the 4 segments in the WWA Monitor and click "Transmit".

1.7. WWA VTEC

The VTEC code provides forecast information in a computer friendly format to simplify the decoding processes. For a VTEC string to show in a particular product the master switch must be active in conjunction with a valid phenomenon and significance codes defined for that product. The phenomenon and significance codes are defined for each hazard and the VTEC master switch is activated by a checkbox, all managed within the WWA Administrative application. This section provides a basic overview of the VTEC string as it relates to WWA. Detailed information can be obtained from the directives document 10-1703.

1.7.1 Primary (P)-VTEC

The VTEC line is completely automated and forecasters should always resist making any changes to this string. If an incorrect VTEC string is discovered this should be passed along to the regional WWA representative. Below is a simplified breakdown of a P-VTEC line for further clarity:

/NEW.KOKX.FF.W.0101.000814T1655Z-000814T1800Z/

NEW - life cycle of product
KOKX - station
FF - phenomenon/event (pp)
W - VTEC significance (s)
0101 - Event Tracking Number (ENT)
000814T1655Z - issue day and time
000814T1800Z - expiration time

1.7.2. Hydrologic (H)-VTEC

The Hydrologic (H)-VTEC string is supported for "Areal" type formatting. This additional (H)-VTEC line will display directly below the (P)-VTEC line and will look similar to the FFW example in figure 10. With the exception of the Immediate Cause (IM) all other fields contain "0" as a place holder. The dynamic IM field is forecaster provided through a popup interface after transmit is selected on hydro products. Selectable options are: ER - Excessive Rainfall, SM - Snow melt, RS - Rain and Snow Melt, DM - Dam or Levee Failure, GO -Glacier-Dammed Lake Outburst, IJ - Ice Jam, IC - Rain and/or Snow melt and/or Ice Jam, UU - Unknown as defined in 10-1703.

WGUS51 KOKX 141656
FFWOKX
NYC103-141800-
/NEW.KOKX.FF.W.0101.000814T1655Z-000814T1800Z/
/0.ER.000000T0000Z.000000T0000Z.000000T0000Z.0/

BULLETIN - EAS ACTIVATION REQUESTED
FLASH FLOOD WARNING
NATIONAL WEATHER SERVICE NEW YORK NY
1255 PM EDT MON AUG 14 2000

THE NATIONAL WEATHER SERVICE IN UPTON NY HAS ISSUED A

* FLASH FLOOD WARNING FOR
  SOUTHWEST SUFFOLK COUNTY IN SOUTHEASTERN NEW YORK STATE

* UNTIL 200 PM EDT

* AT 1254 PM NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED THUNDERSTORMS MOVING NORTHWEST TOWARD THE WARNED AREA. RAINFALL RATES FROM 2 TO 3 INCHES PER HOUR WILL CAUSE FLASH FLOODING OF LOW LYING AND POOR DRAINAGE AREAS.

$$

Figure 9 - VTEC product example

1.8. Watch by County (WBC) / Watch County Notification (WCN)

The local WCN process is dependent on how the WWA application is configured at each WFO. Generally speaking the steps in figure 11 describe this process. For more specific information about what WWA keys on when ingesting SPC WCL & WOU products reference appendix A and B.

1. SPC issues a Watch County List (WCL) highlighting those counties intended for a watch.

2. WWA ingest routines recognize the WCL, identifies intended sites, searches county UGC list, and presents the WCL as a proposed product in the WWA monitor for WFO's with watched counties listed.

3. WFO/SPC coordination call.

4. SPC issues initial Watch County Outline WOU reflecting county addition/subtractions as discussed during the WFO/SPC conference call.

5. *WWA ingest routines recognize SPC's initial WOU, automatically generates the WFO WCN product, and displays the WCN on the defined text workstation for forecaster dissemination.

6. SPC disseminates hourly WOU updates based from the WFO WCN products. (Not processed by the WWA application)

**Step 5 automation dependent on local WFO WCN settings. Listed step is the default setting.*

Figure 10 - Watch By County (WBC) process between SPC and the WFO

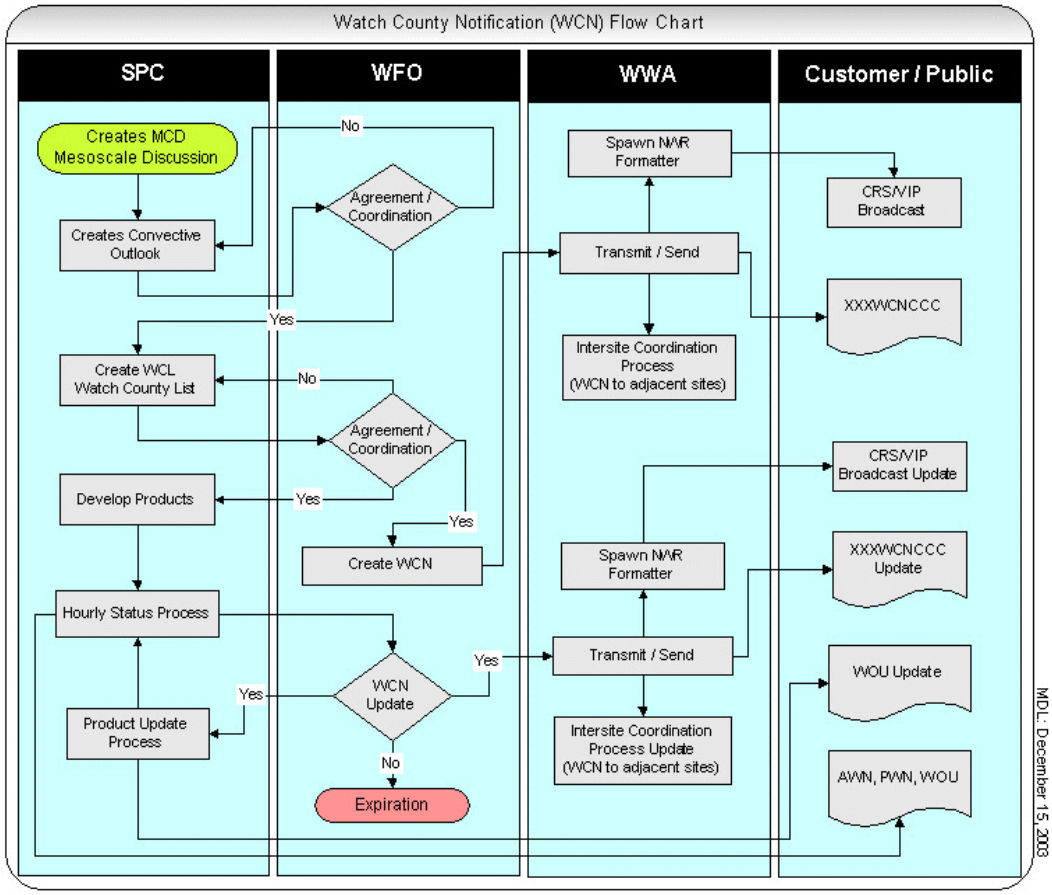

Figure 11 - Watch By County (WBC) flow chart

1.8.1. Local WCN Testing

Although SPC issues WCL and WOU products to automatically generate WCN products through WWA it possible to test this automation locally at the WFO. The instructions provided below describe steps to simulate the arrival of an SPC WCL and WOU product, not based from an existing WCL/WOU in the local Informix database. Once the WCL or WOU products are stored into the local WFO AWIPS database reference section 3.2 of this document for instruction on generating the WCN. Another way to simulate SPC issued WCL/WOU products is to edit, and update fields highlighted in appendix A or B, and save **LOCALLY (000)**, from the AWIPS text workstation text editor.

Finally, it is assumed before any simulation is conducted the local WWA application is configured correctly - see section 2. Be extra cautious when performing steps to store a WCL, WOU, or WCN product into the local WFO Informix database. If during this test the router information is not locally set, "000" or "CCC", you will disseminate publically.

1.8.2. Simulating the SPCs WCL locally at the WFO

1. Launch the WWA application on lx1 or lx2.
   - Use provided desktop menu option

2. Open xterm window on the same Linux box (lx1 or lx2)
   - if done as awipsusr go to step 4.

3. Login as user awipsusr:
   su -l awipsusr
   <enter awipsusr password when prompted>

4. Change into /awips directory:
   cd /awips

5. Edit a local "WCL" file(pico editor reference section 4.3):
   pico WCL# ← Enter # A-J

6. In the pico editor window type in the following, adjusting for the local site (ie...county names/UGC). The idea is to create a product similar to what is shown in appendix A:

```
Line  1 type: NWUS64 KWNS 101250   ← Enter current date & time
Line  2 type: WCLA LOC      ← Where WCL is A-J
Line  3     : ----- Blank Line -----
Line  4 type: .TORNADO WATCH A   ← A-J as in line 2
Line  5 type: COORDINATION COUNTY LIST FROM THE NWS STORM PREDICTION
Line  6 type: CENTER EFFECTIVE UNTIL 2300 UTC   ← Enter valid time
Line  7 type: ----- Blank Line -----
Line  8 type: MIC005-015-045-065-102300-  ← Enter a site valid UGC & time
Line  9 type: ----- Blank Line -----
Line  8 type: MI                  ← Enter valid 2 character state ID
Line  9 type: . MICHIGAN COUNTIES INCLUDED ARE  ← Enter valid state name
Line 10     : ----- Blank Line -----
Line 11 type: ALLEGAN      BARRYEATON     ← Enter equivalent counties
Line 12 type: INGHAM                        defined In UGC line, line #8.
```

Line 13 type: **$$**
Line 14 : ----- Blank Line -----
Line 15 type: **ATTN...WFO...GRR...** ⇦ Enter site ID

7. Save changes using these commands:
   Ctrl-O
   File Name to write: WCL# **<Select Enter>** ⇦ # given in step 5

8. Exit pico editor using the accelerator function:
   Ctrl-X

9. Store created WOU# file locally into AWIPS Informix database:
   textdb -w WCL# < WCL# ⇦ # given in step 5

10. Exit xterm window:
    exit

11. Check WWA Monitor for ingested WCL
    - If not in the monitor, verify settings provided in step 6 and also reference appendix A to ensure trigger/key locations are correct.

1.8.3. Simulating the SPCs WOU locally at the WFO

1. Launch the WWA application on lx1 or lx2
   - Use provided desktop menu option

2. Open Xterm window on lx1 or lx2
   - if done as awipsusr go to step 3.

3. Login as user awipsusr:
   su -l awipsusr
   <enter awips password when prompted>

4. Change into /awips directory:
   cd /awips

5. Edit a local "WOU" file(pico editor reference section 6):
   pico WOU# ⇦ Enter # 0-9

6. In the pico editor window type in the following, adjusting for the local site (ie...county names/UGC). The idea is to create a product similar to what is shown in Appendix B:

Line 1 type: **WOUS64 KWNS 101250** ⇦ Enter current date & time
Line 2 type: **WOU1 LOC**
Line 3 type: ----- Blank Line -----
Line 4 type: **TORNADO WATCH OUTLINE UPDATE FOR WT 1002**
Line 5 type: **STORM PREDICTION CENTER NORMAN OK**
Line 6 type: **0130 AM EDT TUE JUL 10 2003** ⇦ Enter current
Line 7 : ----- Blank Line -----
Line 8 type: **TORNADO WATCH 1002 REMAINS IN EFFECT UNTIL**
Line 9 type: **7:00 PM EDT FOR THE FOLLOWING LOCATIONS:** ⇦ Enter time & zone
Line 10 : ----- Blank Line -----
Line 11 type: **MIC005-015-045-065-102300-** ⇦ Enter a site valid UGC & time
Line 12 : ----- Blank Line -----

```
Line 13 type: MI                          ◂ Enter valid 2 character state ID
Line 14 type: . MICHIGAN COUNTIES INCLUDED ARE  ◂ Enter valid state name
Line 15     : ----- Blank Line -----
Line 16 type: ALLEGAN      BARRY      EATON  ◂ Enter Counties defined in
Line 17 type: INGHAM                         UGC line #11.
Line 18 type: $$
Line 19     : ----- Blank Line -----
Line 20 type: ATTN...WFO...GRR... ◂ Enter site ID
```

7. Save changes using these commands:
   Ctrl-O
   File Name to write: WOU# **<Select Enter>** ◂ # given in step 5

8. Exit pico editor using the accelerator function:
   Ctrl-X

9. Store created WOU# file into AWIPS Informix database:
   textdb -w WOU# < WOU# ◂ # given in step 5

10. Exit xterm window:
    exit

11. Based on the default settings the WCN will be generated, then displayed on the defined text workstation.
    - If not displayed, verify correct settings provided in step 6 and also reference appendix B to insure trigger/key locations are defined accurately.

1.9. Site Backup

Site backup was updated in AWIPS build OB2 to use independent WWA localizations for each backup site. In other words switching into site backup from the Composer will no longer be used and the entire WWA application will be launched as the site being backed up. For configuration steps reference section 2.7. of this document and for instruction on how to operate WWA in backup mode reference section 3.3.

1.10. WWA Hazard Menu / Characteristics Table Summary

This section provides a list of nationally supported WWA product types as they appear in the hazard menu of the WWA Composer. Also shown, is the id each product is publically disseminated under, the appropriate application utilizing the entry, and the national template files associated with each hazard. It is important to ensure all local/custom template file names match exactly as they are referenced in this document. With the delivery of AWIPS build OB3 the WWAAdmin application will formally replace the outdated wwa_setup program and as part of the standardization process all operational WWA template files will assume to have the national naming schema by OB4. If sites find inconsistencies with the custom template file names when compared to the national names sites need to update the WWA configuration before OB4 is installed. If there are questions you are encouraged to contact MDL customer service - see section 4.2.

Changes from AWIPS build OB2:

Yellow highlighted products shown in the subsequent tables represent a change from the previous WWA version deployed in AWIPS build OB2. For further detail on the exact change reference the following key:

New:	New NWS product added to WWA for generation and dissemination or missing template file delivered.
Moved:	Previously existing product moved from an existing category to another.
Changed:	Previously existing product, not moved, but changed to reflect national policy.
Moved/Changed:	Previously existing product moved from an existing category to another existing category that also incorporates changes made to reflect national policy.

1.10.1. Hydrology

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WATCHES					
	Hydrology				
		Flash Flood Watch	FFA	WWA	WWA_ffld_wat.wwaProd nwr_ffld_wat.wwaProd
		Flood Watch	FFA, FLS	WWA RiverPro	WWA_flood_wat.wwaProd nwr_flood_wat.wwaProd
WARNINGS					
	Hydrology				
		Flash Flood Warning	FFW, FFS	WarnGen	N/A nwr_ffld_wrn.wwaProd
		Flood Warning	FLW, FLS	WWA Riverpro	WWA_flood_wrn.wwaProd nwr_flood_wrn.wwaProd
New		Urban/Small Stream Flood Warning	FLW	WWA	WWA_urban_wrn.wwaProd nwr_urban_wrn.wwaProd
STATEMENTS					
	Hydrology				
New		Daily Forecast	RVS	WWA RiverPro	WWA_dlyfrcst.wwaProd nwr_dlyfrcst.wwaProd
New		Daily River and Lake Summary	RVD	RiverPro	WWA_rvrlk_sum.wwaProd nwr_rvrlk_sum.wwaProd
New		Drought/Water Resource Statement	ESF	WWA	WWA_drought_stmt.wwaProd nwr_drought_stmt.wwaProd

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
Change		Flash Flood Statement	FFS, FLS	WWA	WWA_ffld_stmt.wwaProd nwr_ffld_stmt.wwaProd
New		Flood Advisory	FLS	WWA	WWA_flood_adv.wwaProd nwr_flood_adv.wwaProd
New		Flood Potential Outlook	ESF	WWA	WWA_hydro_outlk.wwaProd nwr_hydro_outlk.wwaProd
New		Flood Statement	FLS	WWA	WWA_flood_stmt.wwaProd nwr_flood_stmt.wwaProd
New		Hydrologic Summary	RVA, RVS	WWA RiverPro	WWA_hydro_sum.wwaProd nwr_hydro_sum.wwaProd
New		Minor Flooding Advisory	FLS	WWA RiverPro	WWA_minor_fld.wwaProd nwr_minor_fld.wwaProd
New		River Ice Statement	RVS	WWA RiverPro	WWA_rvrice_stmt.wwaProd nwr_rvrice_stmt.wwaProd
New		River Recreational Statement	RVS	WWA RiverPro	WWA_rvrrec_stmt.wwaProd nwr_rvrrec_stmt.wwaProd
New		River Summary	RVS	WWA RiverPro	WWA_river_sum.wwaProd nwr_river_sum.wwaProd
New		Special River Statement	RVS	WWA RiverPro	WWA_spcrvr_stmt.wwaProd nwr_spcrvr_stmt.wwaProd
New		Urban/Small Stream Advisory	FLS	WWA RiverPro	WWA_urban_adv.wwaProd nwr_urban_adv.wwaProd
New		Winter/Spring Flood Outlook	ESF	WWA RiverPro	WWA_wintspr_fld.wwaProd nwr_wintspr_fld.wwaProd
New		Water Supply Outlook/Summary	ESF	WWA	WWA_water_supply.wwaProd nwr_water_supply.wwaProd

1.10.2. Winter Weather

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WATCHES					
	Winter Storm				
		Winter Storm Watch	WSW	WWA	WWA_wintstrm_wat.wwaProd nwr_wintstrm_wat.wwaProd
New		Lake Effect Snow Watch	WSW	WWA	WWA_lake_eff_wat.wwaProd nwr_lake_eff_wat.wwaProd
New		Blizzard Watch	WSW	WWA	WWA_blizzard_wat.wwaProd nwr_blizzard_wat.wwaProd

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
New		Extreme Cold Watch	WSW	WWA	WWA_extcold_wat.wwaProd nwr_extcold_wat.wwaProd
Move/Change		Wind Chill Watch	WSW	WWA	WWA_wndchil_wat.wwaProd nwr_wndchil_wat.wwaProd
WARNINGS					
	Winter Storm				
		Blizzard Warning	WSW	WWA	WWA_blizzard_wrn.wwaProd nwr_blizzard_wrn.wwaProd
		Heavy Snow Warning	WSW	WWA	WWA_hvysnow_wrn.wwaProd nwr_hvysnow_wrn.wwaProd
		Ice Storm Warning	WSW	WWA	WWA_icestrm_wrn.wwaProd nwr_icestrm_wrn.wwaProd
New		Lake Effect Snow Warning	WSW	WWA	WWA_lake_eff_wrn.wwaProd nwr_lake_eff_wrn.wwaProd
		Sleet Warning	WSW	WWA	WWA_slt_wrn.wwaProd nwr_slt_wrn.wwaProd
		Winter Storm Warning	WSW	WWA	WWA_wintstrm_wrn.wwaProd nwr_wintstrm_wrn.wwaProd
Move/Change		Wind Chill Warning	WSW	WWA	WWA_wndchil_wrn.wwaProd nwr_wndchil_wrn.wwaProd
New		Extreme Cold Warning	WSW	WWA	WWA_extcold_wrn.wwaProd nwr_extcold_wrn.wwaProd
ADVISORIES					
	Winter Weather				
		Freezing Drizzle Advisory	WSW	WWA	WWA_frzdrzl_adv.wwaProd nwr_frzdrzl_adv.wwaProd
		Freezing Rain Advisory	WSW	WWA	WWA_frzrain_adv.wwaProd nwr_frzrain_adv.wwaProd
New		Lake Effect Snow Advisory	WSW	WWA	WWA_lake_eff_adv.wwaProd nwr_lake_eff_adv.wwaProd
		Sleet Advisory	WSW	WWA	WWA_slt_adv.wwaProd nwr_slt_adv.wwaProd
		Snow Advisory	WSW	WWA	WWA_snow_adv.wwaProd nwr_snow_adv.wwaProd
Move		Blowing Snow Advisory	WSW	WWA	WWA_blosnow_adv.wwaProd nwr_blosnow_adv.wwaProd
New		Snow and Blowing Snow Advisory	WSW	WWA	WWA_snow_blosn.wwaProd nwr_snow_blosn.wwaProd

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
New		Winter Weather Advisory	WSW	WWA	WWA_winwea_adv.wwaProd nwr_winwea_adv.wwaProd
New/Change		Wind Chill Advisory	WSW	WWA	WWA_wndchil_adv.wwaProd nwr_wndchil_adv.wwaProd
STATEMENTS					
	Winter Weather				
New		Winter Storm Outlook	SPS	WWA	WWA_ww_outlk.wwaProd nwr_ww_outlk.wwaProd
New		Extreme Cold Outlook	SPS	WWA	WWA_extcold_outlk.wwaProd nwr_extcold_outlk.wwaProd
New		Winter Storm Summary	PNS	WWA	WWA_wintstrm_sum.wwaProd nwr_wintstrm_sum.wwaProd

1.10.3. Non-Precipitation Weather

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WATCHES					
	Non-Precipitation Weather				
New		Excessive Heat Watch	NPW	WWA	WWA_extheat_wat.wwaProd nwr_extheat_wat.wwaProd
New		Frost/Freeze Watch	NPW	WWA	WWA_frostfrz_wat.wwaProd nwr_frostfrz_wat.wwaProd
		High Wind Watch	NPW	WWA	WWA_hiwind_wat.wwaProd nwr_hiwind_wat.wwaProd
WARNINGS					
	Non-Precipitation Weather				
		Dust Storm Warning	NPW	WWA	WWA_blodust_wrn.wwaProd nwr_blodust_wrn.wwaProd
		Excessive Heat Warning	NPW	WWA	WWA_extheat_wrn.wwaProd nwr_extheat_wrn.wwaProd
		Freeze Warning	NPW	WWA	WWA_freeze_wrn.wwaProd nwr_freeze_wrn.wwaProd

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
		Frost Warning	NPW	WWA	WWA_frost_wrn.wwaProd nwr_frost_wrn.wwaProd
		High Wind Warning	NPW	WWA	WWA_hiwind_wrn.wwaProd nwr_hiwind_wrn.wwaProd
ADVISORIES					
	Non-Precipitation Weather				
		Ash Fall Advisory	NPW	WWA	WWA_volash_adv.wwaProd nwr_volash_adv.wwaProd
		Blowing Dust Advisory	NPW	WWA	WWA_blodust_adv.wwaProd nwr_blodust_adv.wwaProd
		Dense Fog Advisory	NPW	WWA	WWA_fog_adv.wwaProd nwr_fog_adv.wwaProd
		Dense Smoke Advisory	NPW	WWA	WWA_smoke_adv.wwaProd nwr_smoke_adv.wwaProd
New		Freezing Fog Advisory	NPW	WWA	WWA_frzfog_adv.wwaProd **nwr_frzfog_adv.wwaProd**
New		Frost Advisory	NPW	WWA	WWA_frost_adv.wwaProd **nwr_frost_adv.wwaProd**
New		Heat Advisory	NPW	WWA	WWA_heat_adv.wwaProd **nwr_heat_adv.wwaProd**
New		Lake Wind Advisory	NPW	WWA	WWA_lake_wind_adv.wwaProd **nwr_lake_wind_adv.wwaProd**
		Wind Advisory	NPW	WWA	WWA_wind_adv.wwaProd nwr_wind_adv.wwaProd
STATEMENTS					
	Non-Precipitation Weather				
New		Excessive Heat Outlook	SPS	WWA	WWA_heat_outlook.wwaProd **nwr_heat_outlook.wwaProd**
Change		~~Frost/~~Freeze Outlook	SPS	WWA	WWA_frostfrz_outlk.wwaProd **nwr_frostfrz_outlk.wwaProd**
		Hazardous Weather Outlook	HWO	WWA	WWA_hazard_outlk.wwaProd nwr_hazard_outlk.wwaProd
New		High Wind Outlook	SPS	WWA	WWA_hiwind_outlk.wwaProd **nwr_hiwind_outlk.wwaProd**
New		No Hazardous Weather Outlook	SPS	WWA	WWA_nonhazard_outlk.wwaProd **nwr_nonhazard_outlk.wwaProd**

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
New		Special Weather Statement	SPS	WWA	WWA_specialstmt.wwaProd nwr_specialstmt.wwaProd
New		Wind Chill Outlook	SPS	WWA	WWA_wndchil_outlk.wwaProd nwr_wndchil_outlk.wwaProd

1.10.4. Severe Weather

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WATCHES					
	Severe Weather				
New		Severe Thunderstorm Watch	SLS, SVS	WWA	WWA_svrt_wat_sls.wwaProd nwr_svrt_wat_sls.wwaProd
New		Tornado Watch	SLS, SVS	WWA	WWA_tor_wat_sls.wwaProd nwr_tor_wat_sls.wwaProd
New		Severe Thunderstorm Watch (WCN)	WCN	WWA	WWA_svrt_wat_wcn.wwaProd nwr_svrt_wat_wcn.wwaProd
New		Tornado Watch (WCN)	WCN	WWA	WWA_tor_wat_wcn.wwaProd nwr_tor_wat_wcn.wwaProd
WARNINGS	Severe Weather	Severe Thunderstorm Warning	SVR, SVS	WarnGen	N/A nwr_svrt_wrn.wwaProd
		Tornado Warning	TOR, SVS	WarnGen	N/A nwr_tor_wrn.wwaProd
STATEMENTS					
	Severe Weather				
New		Severe Weather Outlook	SPS	WWA	WWA_severe_outlook.wwaProd nwr_severe_outlook.wwaProd
New		Severe Weather Statement	SVS	WWA	WWA_severe_stmt.wwaProd nwr_severe_stmt.wwaProd

1.10.5. Marine and Coastal

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WATCHES					
	Marine				

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
New		Coastal Flood Watch	CFW	WWA	WWA_coast_fld_wat.wwaProd nwr_coast_fld_wat.wwaProd
		✻Coastal Waters Flood Watch	ZFP, SFP, CWF	IFPS	N/A N/A
		✻Hurricane Watch	CWF	IFPS	N/A N/A
New		Lakeshore Flood Watch	LSH	WWA	WWA_lakesh_fld_wat.wwaProd nwr_lakesh_fld_wat.wwaProd
		✻Lakeshore Waters Flood Watch	ZFP, SFP, NSH	IFPS	N/A N/A
		✻Severe Thunderstorm Watch	CWF, GLF, NSH	IFPS	N/A NA
		✻Tornado Watch	CWF, GLF, NSH	IFPS	N/A N/A
Change		✻Tropical Storm Watch	TCP	IFPS	N/A N/A
WARNINGS					
	Marine				
New		Coastal Flood Warning	CFW	WWA	WWA_coast_fld_wrn.wwaProd nwr_coast_fld_wrn.wwaProd.
		✻Coastal Waters Flood Warning	ZFP, SFP, CWF	IFPS	N/A N/A
		✻Gale Warning	CWF, GLF, NSH, OFF	IFPS	N/A N/A
		✻Heavy Freezing Spray Warning	CWF, GLF, NSH, OFF	IFPS	N/A N/A
		✻Hurricane Warning	CWF, OFF	IFPS	N/A N/A
		✻Hurricane Force Wind Warning	CWF, GLF, NSH, OFF	ISPS	N/A N/A
New		Lakeshore Flood Warning	LSH	WWA	WWA_lakesh_fld_wrn.wwaProd nwr_lakesh_fld_wrn.wwaProd
		✻Lakeshore Waters Flood Warning	ZFP, SFP, NSH	IFPS	N/A N/A
		✻Marine Warning	CWF GLF NSH	IFPS	N/A N/A
New		✻Special Marine Warning	SMW	WarnGen	N/A nwr_spec_mar_wrn.wwaProd
		✻Storm Warning	CWF, GLF, NSH, OFF	IFPS	N/A N/A

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
Change		✻Tropical Storm Warning	TCP	IFPS	N/A N/A
ADVISORIES					
	Marine				
		✻Dense Fog Advisory	CWF, GLF, NSH	IFPS	N/A N/A
		✻Heavy (High) Surf Advisory	ZFP, SFP, CWF	IFPS	N/A N/A
		✻Heavy (High) Coastal Surf Advisory	ZFP, SFP, CWF	IFPS	N/A N/A
		✻Low Water Advisory	GLF, NSH	IFPS	N/A N/A
		✻Small Craft Advisory	CWF, NSH	IFPS	N/A N/A
STATEMENTS					
	Marine				
New		Coastal Flood Statement	CFW	WWA	WWA_coast_fld_stmt.wwaProd nwr_coast_fld_stmt.wwaProd
New		Lakeshore Flood Statement	LSH	WWA	WWA_lakesh_fld_stmt.wwaProd nwr_lakesh_fld_stmt.wwaProd
New		Marine Weather Statement	MWS	WWA	WWA_mw_stmt.wwaProd nwr_mw_stmt.wwaProd

1.10.6. Fire Weather

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WATCHES					
	Fire Weather				
New		Fire Weather Watch	RFW	WWA	WWA_redflag_wat.wwaProd nwr_redflag_wat.wwaProd
WARNINGS					
	Fire Weather				
New		Red Flag Warning	RFW	WWA	WWA_redflag_wrn.wwaProd nwr_redflag_wrn.wwaProd
STATEMENTS					

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
	Fire Weather				
New		Fire Danger Statement	RFD	WWA	WWA_fire_dan.wwaProd nwr_fire_dan.wwaProd

1.10.7. Miscellaneous

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WATCHES					
New		Avalanche Watch	SAB	WWA	WWA_aval_wat.wwaProd nwr_aval_wat.wwaProd
WARNINGS					
	Miscellaneous				
Change		~~Special~~ Avalanche Warning	SAB	WWA	WWA_aval_wrn.wwaProd nwr_aval_wrn.wwaProd
New		Volcano Warning	VOW	WWA	WWA_volcano_wrn.wwaProd nwr_volcano_wrn.wwaProd
New		Shelter in Place Warning	SPW	WWA	WWA_shelterinplace_wrn.wwaProd nwr_shelterinplace_wrn.wwaProd
New		Radiological Hazard Warning	RHW	WWA	WWA_radiological_wrn.wwaProd nwr_radiological_wrn.wwaProd
New		Nuclear Power Plant Warning	NUW	WWA	WWA_nucpowerplant_wrn.wwaProd nwr_nucpowerplant_wrn.wwaProd
New		Law Enforcement Warning	LEW	WWA	WWA_lawenforce_wrn.wwaProd nwr_lawenforce_wrn.wwaProd
New		Hazardous Materials Warning	HMW	WWA	WWA_hazmat_wrn.wwaProd nwr_hazmat_wrn.wwaProd
New		Fire Warning	FRW	WWA	WWA_fire_wrn.wwaProd nwr_fire_wrn.wwaProd
New		Earthquake Warning	EQW	WWA	WWA_quake_wrn.wwaProd nwr_quake_wrn.wwaProd
New		Civil Danger Warning	CDW	WWA	WWA_civildan_wrn.wwaProd nwr_civildanwrn.wwaProd
ADVISORIES					
	Miscellaneous				
New		Avalanche Advisory	SAB	WWA	WWA_aval_adv.wwaProd nwr_aval_adv.wwaProd

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
STATEMENTS					
	Miscellaneous				
New		Air Stagnation Advisory	ASA	WWA	WWA_air_stag.wwaProd nwr_air_stag.wwaProd
		Alert Administrative Message	ADM		WWA_alert2.wwaProd nwr_alert2.wwaProd
New		Civil Emergency Message	CEM	WWA	WWA_civil_mes.wwaProd nwr_civil_mes.wwaProd
New		Earthquake Report	EQR	WWA	WWA_earthqk_rep.wwaProd nwr_earthqk_rep.wwaProd
New		Other Public Products	OPU	WWA	WWA_oth_prods.wwaProd nwr_oth_prods.wwaProd
		Public Information Statement	PNS	WWA	WWA_pub_info.wwaProd nwr_pub_info.wwaProd
		Record Event Report	RER	WWA	WWA_rec_evt.wwaProd nwr_rec_evt.wwaProd
		Short Term Forecast	NOW	WWA WarnGen	WWA_short_wwaProd nwr_short_wwaProd
		WSR-88D Outage Notification	FTM	WWA	WWA_wsr88d.wwaprod nwr_wsr88d.wwaProd
New		Immediate Evacuation	EVI	WWA	WWA_evacuation.wwaprod nwr_evacuation.wwaProd
New		Network Message Notification	NMN	WWA	WWA_networknotify.wwaprod nwr_networknotify.wwaProd
New		911 Telephone Outage Emergency	TOE	WWA	WWA_911outage.wwaprod nwr_911outage.wwaProd
New		Local Area Emergency	LAE	WWA	WWA_locareaem.wwaprod nwr_locareaem.wwaProd
New		Child Abduction Emergency	CAE	WWA	WWA_childabduction.wwaprod nwr_childabduction.wwaProd

1.10.8. Aviation

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WARNINGS					
	Aviation				

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
New		Airport Weather Warning	AWW	WWA	WWA_airwx_wrn.wwaProd nwr_airwx_wrn.wwaProd
STATEMENTS					
	Aviation				
		Aircraft Incident Notification	OAV	WWA	WWA_aircraft.wwaProd nwr_aircraft.wwaProd

1.10.9. Tropical Cyclone

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WATCHES					
	Tropical Cyclone				
New		Inland Hurricane Wind Watch	NPW	WWA	WWA_hurr_wind_wat.wwaProd nwr_hurr_wind_wat.wwaProd
New		Inland Tropical Storm Wind Watch	NPW	WWA	WWA_tropstorm_wat.wwaProd nwr_tropstorm_wat.wwaProd
WARNINGS					
	Tropical Cyclone				
New		Inland Hurricane Wind Warning	NPW	WWA	WWA_hurr_wind_wrn.wwaProd nwr_hurr_wind_wrn.wwaProd
New		Inland Tropical Storm Wind Warning	NPW	WWA	WWA_tropstorm_wrn.wwaProd nwr_tropstorm_wrn.wwaProd
STATEMENTS					
	Tropical Cyclone				
New		Hurricane Local Statement	HLS	WWA	WWA_hurricane_stmt.wwaProd nwr_hurricane_stmt.wwaProd
New		Post Tropical Storm Report	PSH	WWA	WWA_tropstorm_rep.wwaProd nwr_tropstorm_rep.wwaProd

❇ Not an actual WWA product to issued, however included to support other AWIPS applications & functions like WarnGen, IFPS, and WWA GeoViewer displays.

1.10.10. Segmentation Template Files

Segmented product types need an additional segmentation template file defined as:

WWA_<*product id*>.wwaProd

WWA OB3 supports nine segmentation template files which are as follows:

WWA_esf.wwaProd	WWA_hwo.wwaProd
WWA_now.wwaProd	WWA_npw.wwaProd
WWA_pnw.wwaProd	WWA_rfw.wwaProd
WWA_sps.wwaProd	WWA.wcn.wwaProd
WWA_wsw.wwaProd	

2. CONFIGURATION

2.1. Defining local settings for individual hazard types

Although hazard types represented in the Composer hazard menu (section 1.10) are nationally supported, however local configuration of each individual hazard is still necessary. This section describes how to configure hazard specific characteristics such as VTEC formatting, NWR settings, template file associations, product ids, and more. Please note this section is only intended to outline each field and to provide default values for fields that apply. To understand other possible entries reference the WWA Admin Users Manual.

1. Open an xterm window on lx1.
   - if done as user ifps skip to step 3

2. Login as user ifps:
   su -l ifps
   <enter ifpsusr password when prompted>

3. Launch the WWA Admin application:
   WWAAdmin.sh

4. Select the *Hazard Menu Panel* by either selecting the *hazard* icon on the button bar or by selecting *edit*, then *Hazard Menu* on the menu bar.

5. Double click on a hazard located in either the *Watches*, *Warnings*, *Advisories*, or *statements* listbox.

6. In the launched hazard configuration interface, *Composer/Geographic/Time* tab, set the following fields:

   WWA Composer:
   Check Active: **Create in Composer**

   Time Options:
   Setting locally dynamic / site specific

   Geographical Representation:
   Check Active: **County/Zone**

7. In the hazard configuration interface select the *VTEC/NWR Format* tab and set the following fields:

   VTEC Codes:
   Phenomena = **Product dependent select from menu**
   Significance = **Product dependent select from menu**

   NOAA Weather Radio:
   Setting locally dynamic / site specific
   Provided WWA NWR Template: reference section 2.4.1 & 1.10.

8. In the hazard configuration interface select the *Miscellaneous Format* tab and set the following fields:

   UGC Format:
   Check: **Zone, County, or FireWx base on hazard**

   Product Headline:
   Setting locally dynamic / site specific
   Check appropriate IFPS product where watch headline injection is desired.

   Identifiers (WCN Example Only, reference section 1.10. for value):
   Issuance: **WCN** Clearing: **WCN**
   Followup: **WCN** Canceling: **WCN**

   Geography Lists (example only, define appropriately for hazard):
   Issuance: **cwa_z, cwa_c** Clearing: **cwa_z, cwa_c**
   Followup: **cwa_z, cwa_c** Cancelling: **cwa_z, cwa_c**

   Possible options:
   cwa_z = NWS Zones
   cwa_c = County Based
   marine_zone_dfm = Marine Zones
   fwx_dfm = Fire Weather Zones

   Segmented Checkbox:
   Check for segmented, Unchecked for Non-segmented.

   Ending Period Mentioned in ZFP?
   Not checked / Inactive

   Template File:
   Reference section 1.10 based on hazard

9. In the *Miscellaneous Format* tab select the *Edit...* button associated with the *template file* section to edit local changes.

10. In the launched template file editor customize the following settings (For more detail on other template file changes reference section 2.5 of this document):

    MND Header: Define the site id in MND header
    TTAA00 **KCCC** <NOW | ddhhmm | gmt>&& ← Where CCC is upper case site ID

    Headlines: Verify provided headlines are satisfactory for local use, if not edit accordingly.

Note: AREA SUBSTITUTIONS: Verify “FILE =” and “AREA =” matches what is used as UGC format in step 8 (cwa_z, cwa_c, marine_zone_dfm, fwx_dfm).

11. Save the template file changes:
    Select **Save** button bottom left on interface.

12. Exit Hazard Menu panel:
    Select **Exit** button bottom center of interface.

13. Save and exit the *hazard* configuration interface:
    Select **Ok** button bottom left on interface

14. Repeat steps 5 through 13 for each hazard as needed.

15. Exit WWA Admin application:
    Select the **Exit** button from the bottom center of interface.

15. Login as user fxa:
    su -l fxa
    <enter password when prompted>

16. Run WWA lx1 localization by typing:
    cd /awips/fxa/data/localization/scripts/
    ./mainScript.csh -WWA

17. Remotely log into lx2 by typing:
    rlogin lx2
    <enter password *if* prompted>

18. Run WWA lx2 localization by typing:
    cd /awips/fxa/data/localization/scripts/
    ./mainScript.csh -WWA

19. Exit lx2 remote login session by typing:
    exit

20. Remotely log into ds1 by typing:
    rlogin ds1
    <enter password *if* prompted>

21. Run WWA NWR localization by typing:
    cd /awips/fxa/data/localization/scripts/
    ./mainScript.csh -WWA

22. Exit ds1, fxa, ifps login sessions and xterm window by typing:
    exit
    exit
    exit
    exit

2.2. Activating the VTEC master switch

Before providing steps to activate the VTEC master switch it is important to understand a couple things about WWA and VTEC. First, for a VTEC string to show in a particular product the master switch must be active in conjunction with a valid phenomenon and significance codes defined for that product. The

phenomenon and significance codes are defined for each product through the WWA Administrative application as described in step 7 of section 2.1.

1. Open an xterm window on either lx1 or lx2
   - if done as user ifps skip to step 3

2. Login as user ifps:
   su -l ifps
   <enter ifpsusr password when prompted>

3. Launch the WWA Admin application:
   WWAAdmin.sh

4. Select the *Configuration Panel* by clicking the *wrench* icon on the tool bar or by selecting *edit*, then *Configuration* on the menu bar.

5. In the *Flag Entries* tab of the *configuration panel* select the *VTEC Switch* checkbox to activate the VTEC master switch.

6. Save changes by selecting the *Save* button located on the bottom right of WWA Admin interface.

7. Exit WWA Admin application by selecting the *Exit* button located at the bottom of the WWA Admin interface.

2.3. Watch By County / Watch County Notification settings

Steps to configure the WWA application for WCN operational use are described in this section. Some steps may reveal a correct/valid setting and some may not. Regardless of this it is strongly recommended that each step is carried out to ensure an accurate configuration before going operational with the WCN.

2.3.1. Setting WOU functionality parameters

The OB3 install will automatically configure the WWA WBC/WCN function and set workstation1 as the default location where generated WCN products will display to the forecaster. To change the workstation where this product is displayed follow the provided steps below.

Changing Workstation to Popup the WCN.

1. Open an xterm or terminal window on a linux machine.

2. Login as user ifps or root.

3. Run wou_conf.sh script by typing (where # is the desired workstation):
   /awips/adapt/ifps/bin/linux/wou_conf.sh #

4. You should see a message stating the workstation number. Running the wou_conf.sh will also return the mode to Local Only.

5. Please verify the workstation number by clicking “Show Current Mode” in the WCN Mode (WWA) submenu described above.

6. Exit both the ifps or root login session, and the xterm or terminal window by typing:
   exit
   exit

Note: The OB3 WWA Admin application has a section to configure the WBC/WOU/WCN process. Do not use this section. It will be removed in OB4.

2.3.2. Defining WCN hazard specific parameters

1. Open an xterm window on lx1.
   - if done as user ifps skip to step 3

2. Login as user ifps:
   su -l ifps
   <enter ifpsusr password when prompted>

3. Launch the WWA Admin application:
   WWAAdmin.sh

4. Select the *Hazard Menu Panel* by either selecting the *hazard* icon on the button bar or by selecting *edit*, then *Hazard Menu* on the menu bar.

5. In the upper left listbox labeled “Watches”, scroll to and double click on *Severe Thunderstorm (WCN)*

6. In the launched “Severe Thunderstorm (WCN)” interface, *Composer/Geographic/Time* tab, set the following fields:

   WWA Composer:
   Check Active: **Create in Composer**

   Time Options:
   Setting locally dynamic / site specific

   Geographical Representation:
   Check Active: **County/Zone**

7. In the “Severe Thunderstorm (WCN)” interface select the *VTEC/NWR Format* tab and set the following fields:

   VTEC Codes:
   Phenomena = **SV Severe Thunderstorm**
   Significance = **A Watch**

   NOAA Weather Radio:
   Setting locally dynamic / site specific
   Provided WWA NWR Template: nwr_svrt_wat_wcn.wwaProd

8. In the “Severe Thunderstorm (WCN)” interface select the *Miscellaneous Format* tab and set the following fields:

   UGC Format:
   Check: **County**

Product Headline:
Setting locally dynamic / site specific
Check appropriate IFPS product where watch headline injection is desired.

Identifiers:
Issuance: **WCN** Clearing: **WCN**
Followup: **WCN** Canceling: **WCN**

Geography Lists:
Issuance: **cwa_z, cwa_c** Clearing: **cwa_z, cwa_c**
Followup: **cwa_z, cwa_c** Cancelling: **cwa_z, cwa_c**

Segmented Checkbox:
Checked / Active

Ending Period Mentioned in ZFP?
Not checked / Inactive

Template File:
WWA_svrt_wat_wcn.wwaProd

9. In the Miscellaneous Format tab select the *Edit...* button associated with the Template file section to edit local changes.

10. In the launched WWA_svrt_wat_wcn.preWWA editor interface customize the following settings:

MND Header: Define the site id in MND header
TTAA00 **KCCC** <NOW | ddhhmm | gmt>&&

Where CCC is upper case site ID

Headlines: Verify provided headlines are satisfactory for local use, if not edit accordingly.

11. Save WWA_svrt_wat_wcn.preWWA template file changes:
Select **Save** button bottom left on interface.

12. Exit template file editor interface:
Select **Quit** button bottom right on interface.

13. Save and exit *Severe Thunderstorm (WCN)* configuration interface:
Select **Ok** button bottom left on interface

14. In the upper left listbox labeled “Watches”, scroll to and double click on *Tornado (WCN)*

15. In the launched “Tornado(WCN)” interface, *Composer/Geographic/Time* tab, set the following fields:

WWA Composer:
Check Active: **Create in Composer**

Time Options:
Setting locally dynamic / site specific

Geographical Representation:
Check Active: **County/Zone**

16. In the “Tornado (WCN)” interface select the *VTEC/NWR Format* tab and set the following fields:

    VTEC Codes:
        Phenomena = **TO Tornado**
        Significance = **A Watch**

    NOAA Weather Radio:
        Setting locally dynamic / site specific
        Provided WWA NWR Template: nwr_tor_wat_wcn.wwaProd

17. In the “Tornado (WCN)” interface select the *Miscellaneous Format* tab and set the following fields:

    UGC Format:
        Check: **County**

    Product Headline:
        Setting locally dynamic / site specific
        Check appropriate IFPS product where watch headline injection is desired.

    Identifiers:
        Issuance: **WCN** Clearing: **WCN**
        Followup: **WCN** Canceling: **WCN**

    Geography Lists:
        Issuance: **cwa_z, cwa_c** Clearing: **cwa_z, cwa_c**
        Followup: **cwa_z, cwa_c** Cancelling: **cwa_z, cwa_c**

    Segmented Checkbox:
        Checked / Active

    Ending Period Mentioned in ZFP?
        Not checked / Inactive

    Template File:
        WWA_tor_wat_wcn.wwaProd

18. In the Miscellaneous Format tab select the *Edit...* button associated with the Template file section to edit local changes.

19. In the launched WWA_tor_wat_wcn.preWWA editor interface customize the following settings:

    MND Header: Define the site id in MND header Where CCC is
        TTAA00 **KCCC** <NOW | ddhhmm | gmt>&& ← upper case site ID

    Headlines: Verify provided headlines are satisfactory for local use, if not edit accordingly.

20. Save WWA_tor_wat_wcn.preWWA template file changes:
        Select **Save** button bottom left on interface.

21. Exit template file editor interface:
        Select **Quit** button bottom right on interface.

22. Save and exit *Tornado (WCN)* configuration interface:
        Select **Ok** button bottom left on interface

23. Exit WWA Admin application:
    Select **File**, then **Exit** on the menu bar.

24. Login as user fxa:
    su -l fxa
    <enter password when prompted>

25. Run WWA lx1 localization by typing:
    cd /awips/fxa/data/localization/scripts/
    ./mainScript.csh -wwa

26. Remotely log into lx2 by typing:
    rlogin lx2
    <enter password *if* prompted>

27. Run WWA lx2 localization by typing:
    cd /awips/fxa/data/localization/scripts/
    ./mainScript.csh -wwa

28. Exit lx2 remote login session by typing:
    exit

29. Remotely log into ds1 by typing:
    rlogin ds1
    <enter password *if* prompted>

30. Run WWA NWR localization by typing:
    cd /awips/fxa/data/localization/scripts/
    ./mainScript.csh -wwa

31. Exit ds1, fxa, ifps login sessions and xterm window by typing:
    exit
    exit
    exit
    exit

2.4. NOAA Weather Radio (NWR) CRS Product formatting

This section describes how to set up NWR tower information used by both WWA and IFPS programs. To accomplish this two different applications will be utilized, the IFPS Configuration Menu and the WWA Admin interface. Setting values described for the these applications are default settings, for more information on other valid settings reference section 4.3. for related material like the WWA Admin Users Manual.

2.4.1. Configuring a WWA Product for CRS formatting

General NWR Settings:

1. login as user ifps by typing the following in the open xterm window:
    su -l ifps
    <enter ifpsusr password *if* prompted>

2. Launch the WWA Admin application:
    WWAAdmin.sh

3. Select the *Configuration Panel* by clicking the *wrench* icon on the tool bar or by selecting *edit*, then *Configuration* on the menu bar.

4. In the *Please Select Configuration Type* pull down menu select *WWA Site*.

5. In the *Other Miscellaneous Entries* tab of the *WWA Site configuration panel* set the following fields:

   Use Cancel Offset Time:
   Check Active

   Cancel Offset Time (Minutes):
   20

   CTA Delimiter:
   %C

   NWR Overview Section Code:
   OFF

   NWR Short Fused Geography Code:
   Let Program Decide Format

   NWR Geo List Name for Tower Association:
   nwr_twrs

6. Save changes by selecting the save button located on the bottom right of WWA Admin interface.

Hazard Specific NWR Settings:

7. Select the *Hazard Menu Panel* by either selecting the *hazard* icon on the button bar or by selecting *edit*, then *Hazard* on the menu bar.

8. Double click on a hazard located in either the *Watches*, *Warnings*, *Advisories*, or *statements* listbox.

9. In the hazard configuration interface select the *VTEC/NWR Format* tab and set the following NWR related fields (other settings see section 2.1.):

   Send to CRS by default:
   Check Active

   EAS ID:
   Select from list, or type in EAS ID. Hazard dependent.

   NWR Template File:
   Hazard Specific: reference section 1.10.

   Select NWR Template file *Edit* button:
   <Make local adjustments>
   Save
   Quit

   Select CRS *Header Info* button:
   <set fields based on local needs>
   Save
   Quit

10. Exit the hazard configuration interface by selecting *OK* at the bottom left of the WWA Admin application.

11. Exit WWA Admin application by selecting the *Exit* button located at the bottom of the WWA Admin interface.

12. Exit the ifps login session and close xterm window:
    exit
    exit

2.4.2. IFPS NWR Tower Settings

1. Open an xterm window on either lx1 or lx2
   - if done as user ifps skip to step 3

2. Login as user ifps:
    su -l ifps
    <enter ifps password when prompted>

3. Launch the IFPS Configuration Menu by typing:
    /awips/adapt/ifps/bin/linux/config_ifps *CCC* ← CCC = Site ID

4. Update zone/county-to-NWR Tower list by following these steps:
   - When zones are added to your WFO or a neighbor's WFO, they will often fall under one or more of your NWR Towers' broadcast areas. Since it is difficult or impossible for the CWA Change scripts to determine which towers the new zone belongs to, you must be do this step manually.

   Step 1: **In the Configure IFPS menu select "Foundation Software"**
   Step 2: **From the Configure Foundation Software menu select "Establish Geographic Settings" to launch the Config Geo interface.**
   Step 3: **In the Config Geo interface set the Mode selector bar to "Group".**
   Step 4: **In the Config Geo interface set the Geography selector bar to "Radio Towers".**
   Step 5: **In the Config Geo interface select a NWR Tower ID from the Group selector bar.**
   Step 6: **Add zone to selected tower by selecting the zone on the map and then by selecting the *Add* button.**
   Step 7: **Repeat steps 5 & 6 for each zone you wish to add to the tower's broadcast area.**

6. Save & Close the IFPS Configuration Menu.

7. Exit the root login session, and close xterm window:
    exit
    exit

2.4.3. WWA Summary Product Settings

The WWA_Summary product is run on the concept of summary suites, which is a similar concept to the CRS broadcast suites, and relays information concerning the WHAT, WHEN, and WHERE of each hazard. In the table below there are examples of possible summary suites. The first column refers to the name of the product. The second column refers to hazard identifiers, which define hazards such as a tornado warning (TOR) and the order in which these hazards are listed is the order in which they will appear in the summary product. The "+" character indicates the hazard is a trigger, which is similar to a trigger in the CRS setup tables. Numbers in the third column are representative of the number of hazards in the specific summary suite that must be issued at one time for a summary product to be produced. There is a hierarchical order in the summary suites so that only the summary suite with the highest priority is broadcast. For more information about how to configure this functionality reference the WWA Admin users manual.

SUM	TOR+,SVR+, FFW+,FLW+	3
SUM	TOA+,SVA+, FFA+,FLA+	4
SUM	BZW+,WSW, NPW+,HWW+	2

2.5. Template Files

Since the WWA application uses the same template file class designed by FSL for WarnGen the same rules apply to WWA template files. Because of this FSLs OB2 Template file documentation located at /awips/fxa/data/localization/documentation/TextTemplate.doc on ds1 is provided below.

In WFO Advanced, the software that generates the text for watches, warnings, or advisories (wwa's) uses template files to control exactly how each wwa is built. Template files allow one to change the characteristics of a particular wwa, or add a new one, without having to change the code.

There are four main concepts to understand within template files, paragraphs, substitutions, bullets, and variables.

The text of a template is very free format. In general, consecutive spaces are changed to one space before processing, spaces preceding a period are removed, and all consecutive lines of text without an intervening blank line are considered to be in a paragraph. Also, individual lines and arguments in substitutions have their leading and trailing spaces stripped before processing. A place holder character (~) and a paragraph break character (&) are available to override this default behavior. Later in this document is a table of all special characters.

A substitution is a signal to the software to build some text based on the geographic, temporal, or other characteristics of the wwa in question. The general format of a substitution is as follows:

< substitution_type | qualifier_type = qualifier_value | ... >

The substitution type, qualifier type, and qualifier value are in general just text. However, certain qualifier types for certain substitution types do result in the qualifier value being interpreted as a number. Not all qualifier types require that a qualifier value be present. Normally, leading and trailing spaces are stripped off of the qualifier value. However, if a `==' (double equals sign) is used between a qualifier type and value, then a leading and trailing space is added to the qualifier value.

If a line or series of lines contain nothing but a substitution that results in no text being generated, it is as if those lines never appeared in the template. Thus, an null substitution will not create a paragraph break in this case. If it is desired that text from two substitutions be directly adjacent with no intervening spaces, then the trailing delimiter from the first needs to be directly adjacent and on the same line as the leading delimiter from the next. A line continuation (backslash at the end of a line, see special characters table) can accomplish this as well.

To date, by convention, substitution types are all caps and qualifier types are all lower case with underscores. The text that results from a substitution can be completely within a paragraph, be a single paragraph in itself, or span several paragraphs. Place holder and/or paragraph break characters in the text from a substitution are fully interpreted in organizing paragraphs. Later in this document is a table of currently available substitutions. Two very important types of substitutions rely on geographic entity lookup tables (gelt's) to produce their text. Some additional information about gelt's is available from newGELTmaker.doc.html in localization/documentation/. The reader is also directed to the documentation in the software modules GeoEntityLookupTable.C and GeoEntityLookupTable.H for further information.

A bullet is a piece of text that can appear or not appear in the output text based on a software switch under control of the user. The basic format of a bullet is as follows:

{= ^ title text | bullet text }

The equals sign (=) is an optional signal which, if present, specifies that the state of this bullet can be triggered by the contents of a previous product. This new feature is mostly to support follow-up and the equals sign must be immediately after the leading curly to invoke this. There is an automated algorithm for choosing the exact text that triggers the inclusion of the bullet in this case, but that can be overridden by providing a second equals sign, and then the text between the two equals signs is the trigger text. The trigger text can be divided into multiple strings, each of which must be present in the text to activate the bullet, using a comma (,) as a delimiter. Finally, one can place a leading minus sign (-) on a trigger string, which means that this text must not be present to trigger the bullet. For bullets that show up on the user interface, this only controls the initial state of the bullet; the user can always change it.

The carat sign (^) is an optional signal which, if present, specifies that this text should be marked for inclusion by default. The title text is a label by which the user refers to the text of the bullet. The bullet text is what actually appears in the output text when the bullet is marked for inclusion. Just as with a substitution, the text from a bullet can be completely within a paragraph, be a single paragraph in itself, or span several paragraphs. Substitutions can appear within a bullet, but bullets cannot be imbedded within substitutions.

There is a new feature that allows a lot more control over whether to use the text for a given bullet and whether to present that as an option on the user interface. This is based on logical operators being included in the title text of the bullet. These logical operators make it possible for bullets to be hidden from the user

interface and to have their states controlled by the contents of template variables, which can also read from environment variables. These logical operators are in square brackets, and should have one of the following formats: [show xxx.oo.yyy], [on xxx.oo.yyy], [toggle xxx.oo.yyy], and [xxx.oo.yyy]. Any text not matching one of these formats will be interpreted as the plain text part of the title. The xxx and yyy is any arbitrary text that may or may not contain template variables. The `oo' is one of the following logical operators: eq, ne, gt, lt, ge, le, in (left string is contained in right string) and ni (left string is not contained in right string). The operators gt, lt, ge, and le are purely string comparisons. Only one of these logical operators are allowed in the title. The one with the lead keyword `show' means that if the test is true, then present that bullet in the user interface. The one with the lead keyword `on' means if the test is true, then that bullet should be on by default. The `toggle' test will present that bullet in the user interface AND toggle the default inclusion state as determined by the leading carat sign (^) if true. The remaining type of test with no keyword will never be shown to the user, and its presence in the output text will depend on the truth of the test.

While it is not possible to nest substitutions, it is possible to direct the text of a substitution into a variable, and then that variable can be referred to within the value of a `lead' or `trail' qualifier in another substitution. The text of any substitution can be directed to a variable by placing a qualifier of the type `var' in the substitution. The value of the `var' qualifier is the name of the variable that the text of the substitution is assigned to. Variable names should be all alphabetic or numeric characters, with no escape sequences or spaces (underscores are OK). A variable name is referred to with a leading `$$' (double dollar sign) and a trailing `!' (exclamation point). If one puts variable defining substitutions into a bullet, then whether that variable is defined is controlled by whether that bullet is turned on.

For products that are not on the very top level warnGen menu (in the Other: selector), the title that appears in that menu is controlled by the first line in the template file, which has the following format:

// "sort text | title text"

Any text before the optional vertical bar does not actually appear on the warnGen menu, but just controls the sorting of the products in the menu. If a template has no title, then no entry corresponding to it will appear in the Other: product selector.

Special characters for template files:

\ Backslash at the end of a line represents a line continuation to the module that actually reads the text file into memory. Line continuations are meaningless in the context of the template and can cause odd paragraphing behavior, so this use is not recommended. In all other cases, a backslash escapes the immediately following character. This means that the following character will appear in the text without the backslash, but will not be interpreted as a special character.

// Double slash is a comment marker in the module that actually reads the text file into memory. From there to the end of the line is a comment. Comments are OK, but they should be used with care inside a substitution or bullet.

$$ Double dollar sign is the signal that what follows is a variable name, and that it should be replaced with the value of that variable in the output text. The variable name is up to the next escape or exclamation point.

! Variable name terminator. In the case where a `!' is used to terminate a variable name, the exclamation point does not appear in the output text.

When appearing at the beginning of a line, the pound sign can be part of a C/C++ style include statement, which are interpreted by the module that actually reads the text file into memory.

<> Substitution delimiters. Text in angle brackets does not appear in the output directly. Substitution text is a description of some text which can be built based on the geographic, temporal, or other characteristics of the watch, warning, or advisory in question.

{} Bullet delimiters. Text in curly braces can appear or not appear in the output text based on a software switch under control of the user.

| Field separator. Separates title from the text in a bullet, individual qualifiers from each other in a substitution.

= Separates the type of a qualifier from its value. Also, when immediately following the lead curly for a bullet, allows the state of the bullet to be controlled by the text of a previous product.

^ Marks a bullet as being included by default.

, Delimits individual trigger strings when the lead curly of a bullet is immediately followed by an equals sign, and then another equals sign to designate trigger text.

~ Indent/place holder. When internal to a paragraph, will cause a space to be placed where otherwise the automatic paragraph formatting might cause a space to be removed. At the beginning of a paragraph causes all text in that paragraph to be indented one space for each ~ that appears. An escaped space will behave just like a place holder, but not like an indent marker.

% Reverse indent marker. When at the beginning of a paragraph causes all text in that paragraph except for the first line to be indented one space for each % that appears. Reverse indent markers can appear immediately after standard indent markers (~ characters).

& Paragraph break. Causes a new paragraph to start without an intervening blank line. Two consecutive paragraph breaks will force a blank line to appear.

[] Used as translation delimiters within translation control strings, and as delimiters for logical expressions in bullet titles.

. Delimits logical operators within logical expressions that may appear in bullet titles.

` The back quote is an invisible character, which will result in no output text but will still be treated as a non-null piece of text for the purposes of formatting the output from a GELT.

Currently available substitutions. Each type is followed by a sub table describing the applicable qualifiers. Qualifiers require no value unless qualifier values are mentioned.

Time generating substitutions. These all have the same list of possible qualifiers.

ISSUE	Causes text to be generated describing the issue time of the wwa being generated.
START	Causes text to be generated describing the start time of the wwa being generated.
EXPIRE	Causes text to be generated describing the expiration time of the wwa being generated.
EVENT	Causes text to be generated describing the time of occurrence of the weather event for which the wwa is being generated.
NOW	Causes text to be generated describing the current time.
clock	Output in clock format, e.g. 905 PM MDT. Default.
header	Output in product header format, e.g. 255 PM MDT WED JUL 12 1995.
ddhhmm	Output in like format, where dd is day, hh is hour, and mm is minute.
plain	Output including a plain language description of the time of day, e.g. 200 PM MDT WEDNESDAY AFTERNOON.
local	Output in local time. Default.
gmt	Output in Greenwich Mean Time.
interval	Value is number of minutes to round time to. By default times are not rounded.
delta	Value is number of minutes by which to change the time specified by the substitution type. Default is zero.
round	Same as interval, but causes the resulting time to be used to alter the internally held value for the time being output.
last_table	Only output this time text if the last area table used produced some output.
no_text	Will not generate any text.
lead	Value is some arbitrary text that will precede the time description.
trail	Value is some arbitrary text that will follow the time description.
var	Value is the name of a variable that has assigned to it the text produced here.
TIME_ZONE	This substitution generates no text; its purpose is to control how and whether time zone information is put into formatted time strings.
no	If present, do not output time zone information.
yes	If present, do output time zone information. This is the default case.
change	If present, output time zone information when the time zone changes. Will always output a time zone the first time after this is invoked.
force	Output time zone information using a specific unix time zone environment variable, the text of which is in the value.
TWO_TIMES	This substitution generates no text. When present, the `Change...' dialog in the warnGen interface becomes active. The beginning and ending times in this dialog are accessible in the template using the START and EXPIRE substitutions.
VAR	This substitution is made available for the purpose to allowing the user to direct the contents of the lead and/or trail qualifier into a variable.

lead Beginning of some arbitrary text.
trail Ending of some arbitrary text.
var Value is the name of a variable that has assigned to it the text produced here.

DISTANCE_UNITS This substitution generates no text; its purpose is to control the units with distances are reported.
units Units string to attach to distances, defaults to `MILES'.
multiplier Number to multiply raw distance values by to get the desired unit. Raw distances are in km, so default multiplier is 0.6211 (1/1.61).

MOVEMENT This substitution generates text that describes the movement of the weather event for which the wwa is being generated. If the movement is marked as undefined, no text will be generated.
units Units string to attach to speed, defaults to `MPH'.
multiplier Number to multiply raw speed from tracking calculation to get desired unit. Raw speed is in km/s, so default multiplier is 2236 (3600/1.61).
interval Value is number of speed units to round speed to. By default speeds are not rounded except to an integer.
stationary If this is text, then it is the text used to describe a stationary weather event. If a number, then it is the speed in output units below which a weather event is considered stationary. Defaults to `STATIONARY' and 2.5.
move_lead Value is some arbitrary text that will precede the speed and direction description for a weather event that is not stationary. Defaults to `MOVING~'.
move_trail Value is some arbitrary text that will follow the speed and direction description for a weather event that is not stationary. Defaults to an empty string.
lead Value is some arbitrary text that will precede the movement description.
trail Value is some arbitrary text that will follow the movement description.
var Value is the name of a variable that has assigned to it the text produced here.

COORDS Puts encode latitude and longitude coordinates into the product that can be used for plotting warnings.

DURATIONS This is a special substitution that generates no text. Each qualifier is a possible duration for the wwa, in number of minutes or in hh:mm format. The qualifier with the value `default' is the default duration. (This substitution type does completely invert the usual syntax for qualifier types and values.)

AUX_INFO This is a special substitution that generates no text. Each qualifier is a key, and each value is some text that can be passed back to the client based on that key.

DEPICT_KEYS This is a special substitution that generates no text. Each qualifier is a map background key that should be loaded in the wwa program when this template is being used.

COLUMNS This is a special substitution that generates no text. This controls column layouts.
lead Text that occurs before the first column. Defaults to `~~' (two place holders).
separator Text that occurs before between columns. Defaults to `~' (one place holder).

trail	Text that occurs after the last column. Defaults to an empty string.
AREA	This substitution causes text to be generated describing the area of the wwa. This substitution makes use of a gelt.
file	Value is the name of a gelt file, minus the file suffix. One can use unix environment variables within the file name. There can be several `file' qualifiers in one `AREA' substitution. With one exception, all qualifiers up to the next `file' qualifier modify that `file' qualifier. The default behavior is to process each `file' qualifier in order until it finds one that actually generates some text, then will return that text for the substitution. When two consecutive file qualifiers refer to the same file, the values of other qualifiers will be preserved. They will often revert to defaults when a new file is introduced. If this is not true, then this will be noted and that qualifier will be referred to as persistent.
accumulate	If this qualifier is present, then all file qualifiers will be processed and the list of items used will be the sum total of the items produced from all of the tables. This qualifier is persistent.
area	This qualifier defines the area of interest that this gelt file will try to provide a description for. If the value is `WWA' then the base polygon of the wwa is used to define the area of interest. If the value is some other gelt file, then whatever area is currently held within that gelt is used as the area of interest. This is useful for imposing consistency between different gelts that might otherwise react differently to filtering because they have different types of geographic entities. If this qualifier is not present, whatever area is currently held within that gelt is used, unchanged. The first time a gelt file is referred to within a template, this qualifier needs to be present. This qualifier is persistent even to file changes.
format	The purpose of this qualifier is to control how lists of individual items from a gelt are put together. This value can be `list', `ugc', `count', `none', `simple', `xxx_columns', or `blank' of which `list' is the default. `list' will cause each item returned to be put in a list separated by elipses. `ugc' will cause the items to be formatted as they were a list of ugc codes. `xxx_columns' will cause the items to be arranged in columns, where the actual text of the value is `one_column', `two_columns' up through `seven_columns'. `count' just returns an ASCII string representing the number of items in the list. `simple' means just catenate the text together. `none' means no text is generated for this file qualifier. `blank' means no text is generated for the list, but lead and trail qualifiers will still be used. This qualifier is persistent.
multiple	If the value is "yes", then the substitution will only produce text if more that one point describes the weather event. If the value is "no", then the substitution will only produce text if a single point describes the weather event. Any other value invokes the default behavior, which is to allow any number of points in the weather event. If the weather event does not exist, then this qualifier has no effect. This qualifier is persistent.
min_count	Minimum number of unique items that must result from the gelt query after translation in order to allow the current qualifier to generate text. Defaults to one.

	When in accumulate mode and the value is negative, accumulation will stop as soon as that many (absolute value) are present. This qualifier is persistent.
max_count	If positive, and more than this many items are returned from the gelt query, no text will result. If negative, will truncate the list to that many (absolute value). When in accumulate mode and the value is positive, will only dispose of the text from the specific `file' qualifier that caused the count to exceed the threshold, not all text. Defaults to a very large number. This qualifier is persistent.
output_field	Each geographic entity in a gelt has some descriptive text associated with it, which is broken into one or more fields delimited by vertical bars. The value of the `output_field' qualifier is the index of the field which is the text returned for each geographic entity, one based. Zero (the default) mean returns all text regardless of field delimiters.
item_format	This value is a translation control string which controls how each item from the gelt is reformatted. The default is to do no reformatting. See next main section for information about translation control strings. This is really a more powerful version of the `output_field' qualifier.
sort_by	This value is a translation control string which controls how the individual items from the gelt are sorted before being used. If blank, then no sorting occurs, which is the default behavior. See next main section for information about translation control strings. This qualifier is persistent.
stratify_by	This value is a translation control string which controls one manner by which the individual items from the gelt are grouped before being used. Items for which the result of the translation are the same are considered to be in the same group. For each group, it is as if a separate substitution entry was present, with the formatting and application of lead/trail qualifiers occurring independently. If blank, then no stratification occurs, which is the default behavior. This qualifier is persistent.
group_by	This value is a translation control string which controls yet another manner by which the individual items from the gelt are grouped before being used. This manner of grouping responds to the sort_by qualifier. Consecutive items that have the same result of the group_by translation are in the same group. These groups do not respond as if each were from a separate substitution entry. An item's position in a group can be acted on by the item_format translation control string. If blank, all items are in the same group, which is the default behavior. This qualifier is persistent.
in_group	If positive, and more than this many items in any group result from the gelt query, no text will be returned. If negative, will truncate each group to that many items (absolute value). When in accumulate mode and the value is positive, will only dispose of the text from the specific `file' qualifier that caused the maximum group size to exceed the threshold, not all text. Defaults to a very large number. This qualifier is persistent.
max_groups	If positive, and more than this many groups result from the gelt query, no text will be returned. If negative, will truncate the list to that many groups (absolute value). When in accumulate mode and the value is positive, will only dispose of the text from the specific `file' qualifier that caused the group count to exceed the threshold, not all text. Defaults to a very large number. This qualifier is persistent.

unique_by	Under normal circumstances, non-unique items will be removed from a list, this being determined by the result of their item_format qualifier. The result of the translation control string in a unique_by qualifier is yet another way in which items can be marked as non-unique and be removed. If blank, then it will not be used, which is the default behavior. This qualifier is persistent.
delta	Invokes a feature which causes a time, distance, and bearing to be assigned to each geographic entity, based on when the weather event will be closest to that entity. If a value is present, entities having a time associated with them within that many minutes of the start time of the warning will not be used. In place of this time offset, one may express the cutoff with any of the following time types as a literal string: issue, start, now, event, purge, and expire. The time, distance and bearing can be used by a translation control string. This qualifier is persistent.
interval	If present, times assigned to geographic entities will be rounded to this many minutes. This qualifier is persistent. If unrounded times are OK, then a negative value for the interval will be most efficient.
max_dist	A point more than this far from the location of the weather phenomena (in km) will not be referenced. This also causes a time, distance, and bearing to be assigned to each geographic entity, based on when the weather event will be closest to that entity. This qualifier is persistent.
proximal	Value is an additional phrase prepended to the description of a single point if it happens to be directly over some geographic entity. If a number, then this is how close a weather event must be to a location to be considered "OVER" it, in km. The default values are "OVER~" and 3 km. This qualifier is persistent.
proximal2	Just like proximal except it come into effect when the distance is between the distance for proximal and the distance for proximal2. The default values are "NEAR~" and 8 km. This qualifier is persistent.
portions	If present, activates a feature which will provide a plain language description of which portions of a geographic entity fall within the area of interest. A value, if present, represents the minimum size in square km that an entity must be in order to be described in this fashion, the default being zero.
central	If present, activates a feature which will allow the use of the keyword "central" when describing a portion of an area.
extreme	If present, activates a feature which will make use of the keyword "extreme" when describing the situation where only a very small portion of some geographic entity falls within the area of interest.
min_fraction	Value is the minimum fraction of a geographic entity which must fall within the area of interest for that geographic entity to be included. Default value is zero, so if this qualifier is not included, then the feature is in effect turned off.
min_area	Value is the minimum size in square km of a geographic entity which must fall within the area of interest for that geographic entity to be included. Default value is zero, so if not this qualifier is not included, then the feature is in effect turned off.
test_both	When present, a portion of a geographic entity must pass both tests to be included in the area of interest. by default, it must only pass one test or the other.
lead	Value is a translation control string which will provide text that will precede the text provided by the gelt. First item from the gelt is input to the translation control string to produce the result. This qualifier is persistent.

trail	Value is a translation control string which will provide text that will follow the text provided by the gelt. Last item from the gelt is input to the translation control string to produce the result. This qualifier is persistent.
include_field	It is possible to only include those geographic entities for which a certain text fragment occurs in a certain field; the value of this qualifier is the index of that field. This index affects the next `include_text' qualifier that occurs. The default is 0, which causes all fields to be checked.
include_text	Text to look for in the field pointed to by value of the last `include_field' qualifier. The occurrence of the `include_text' qualifier is what actually activates this feature. Multiple occurrences of the `include_text' qualifier for a single `file' qualifier will result in multiple checks for text that must be present in an entity. The default behavior is for no include checks to occur. The effect of this qualifier never carries over between `file' qualifiers.
exclude_field	It is possible to exclude those geographic entities for which a certain text fragment occurs in a certain field; the value of this qualifier is the index of that field. This index affects the next `exclude_text' qualifier that occurs. The default is 0, which causes all fields to be checked.
exclude_text	Text to look for in the field pointed to by value of the last `exclude_field' qualifier. The occurrence of the `exclude_text' qualifier is what actually activates this feature. Multiple occurrences of the `exclude_text' qualifier for a single `file' qualifier will result in multiple checks for text that must not be present in an entity. The default behavior is for no exclude checks to occur. The effect of this qualifier never carries over between `file' qualifiers.
no_same	If present, will not generate any text if the last time a gelt based substitution was used the exact same text was generated.
cross	This allows an additional table to be used to add to information to individual item descriptions. In the cross reference table, the description is of the centroid of the entity found in the main table in the `file' qualifier. See the description of translation control strings for information about how to use the information from across reference table in an item description.
used	This qualifier allow one to exclude geographic entities that were previously used to generate text in some other instance of an AREA or WX substitution. There are three main values for this qualifier; `clear', which means empty out the list of previously used entities, `accumulate', which means add entities from this substitution to the list, and `avoid', which means do not generate text for those entities in the list. There are also two hybrid values for this qualifier; `begin', which means clear then accumulate, and `implement' which means avoid than clear.
var	Value is the name of a variable that has assigned to it the text produced here.
area_handling	Value is how the input area is used to update the current active area held by the gelt. Defaults to `initialize', which means set the active area to be the same as the input area. `add' means add the input area to the current active area. `remove' means remove the input area from the current active area. `restrict' means only keep in the current active area those area both already in the current active area and in the input area. `toggle' means change the active state of all points in the input area.

sequence	When present, this qualifier activates a feature whereby potentially redundant text can be removed from the items returned. If there is grouping as defined with the group_by qualifier, then redundant text can be removed from all but one item within the group. Any text before a leading `FROM' before any occurrence of `TO' will be removed from all but the first of the group. Any text after any occurrence of `TO' and starting with the occurrence of one of the delimiting strings supplied as arguments to any number of sequence qualifiers will be removed from all but the last of the group. Delimiting strings supplied as arguments beginning with an underscore allow redundant text to be removed from the beginning of an item when it occurs both at the beginning and end of the item. Text after the underscore in this case are strings that must occur in the redundant text for it to be removed.
WX	This substitution causes text to be generated describing the location of the weather event for which the wwa is being generated. This substitution makes use of a gelt.
file	Value is the name of a gelt file, minus the file suffix. One can use unix environment variables within the file name. There can be several `file' qualifiers in one `WWA' substitution. All qualifiers up to the next `file' qualifier modify that `file' qualifier. The code will process each `file' qualifier in order until the required minimum number of weather points have been identified. When two consecutive file qualifiers refer to the same file, the values of other qualifiers will be preserved. They will often revert to defaults when a new file is introduced. If this is not true, then this will be noted and that qualifier will be referred to as persistent.
area	This qualifier defines the area of interest that this gelt file will try to provide a description for. If the value is `WWA' then the base polygon of the wwa is used to define the area of interest. If the value is some other gelt file, then whatever area is currently held within that gelt is used as the area of interest. This is useful for imposing consistency between different gelts that might otherwise react differently to filtering because they have different types of geographic entities. If this qualifier is not present, whatever area is currently held within that gelt is used, unchangeded. The first time a gelt file is referred to within a template, this qualifier needs to be present.
format	Value is either `list', `line', or `none', of which `line' is the default. `list' will cause a description of the locations of weather events to be presented as an elipses delimited list. `line' will cause a list of weather locations to be described as a line spanning these locations. `none' will result in no text being generated. This qualifier is persistent.
multiple	If the value is "yes", then the substitution will only produce text if more that one point is being used to describe the weather event. If the value is "no", then the substitution will only produce text if only one point is being used to describe the weather event. Any other value invokes the default behavior, which is to allow any number of points. This qualifier is persistent.
output_field	Each geographic entity in a gelt has some descriptive text associated with it, which is broken into one or more fields delimited by vertical bars. The value of the `output_field' qualifier is the index of the field which is the text returned for

	each geographic entity, one based. Zero mean returns all text regardless of field delimiters. This qualifier is persistent.
item_format	This value is a translation control string which controls how each item from the gelt is reformatted. The default is to do no reformatting. See next main section for information about translation control strings. This is really a more powerful version of the `output_field' qualifier. This qualifier is persistent.
portions	If present, activates a feature which will provide a plain language description of which portions of a geographic entity fall within the area of interest. A value, if present, represents the minimum size in square km that an entity must be in order to be described in this fashion, the default being zero.
extreme	If present, activates a feature which will make use of the keyword "extreme" when describing the situation where a point falls very near the boundary of some geographic entity.
min_fraction	Value is the minimum fraction of a geographic entity which must fall within the area of interest for that geographic entity to be included. Default value is zero, so if not this qualifier is not included, then the feature is in effect turned off.
min_area	Value is the minimum size in square km of a geographic entity which must fall within the area of interest for that geographic entity to be included. Default value is zero, so if not this qualifier is not included, then the feature is in effect turned off.
test_both	When present, a portion of a geographic entity must pass both tests to be included in the area of interest. by default, it must only pass one test or the other.
lead	Value is a translation control string which will provide text that will precede the text provided by the gelt. First item from the gelt is input to the translation control string to produce the result. This qualifier is persistent.
trail	Value is a translation control string which will provide text that will follow the text provided by the gelt. First item from the gelt is input to the translation control string to produce the result. This qualifier is persistent.
include_field	It is possible to only include those geographic entities for which a certain text fragment occurs in a certain field; the value of this qualifier is the index of that field. This index affects the next `include_text' qualifier that occurs. The default is 0, which causes all fields to be checked.
include_text	Text to look for in the field pointed to by value of the last `include_field' qualifier. The occurrence of the `include_text' qualifier is what actually activates this feature. Multiple occurrences of the `include_text' qualifier for a single `file' qualifier will result in multiple checks for text that must be present in an entity. The default behavior is for no include checks to occur. The effect of this qualifier never carries over between `file' qualifiers. exclude_field - It is possible to exclude those geographic entities for which a certain text fragment occurs in a certain field; the value of this qualifier is the index of that field. This index affects the next `exclude_text' qualifier that occurs. The default is 0, which causes all fields to be checked.
exclude_text	Text to look for in the field pointed to by value of the last `exclude_field' qualifier. The occurrence of the `exclude_text' qualifier is what actually activates this feature. Multiple occurrences of the `exclude_text' qualifier for a single `file' qualifier will result in multiple checks for text that must not be present in an

	entity. The default behavior is for no exclude checks to occur. The effect of this qualifier never carries over between `file' qualifiers.
filter	If present, activates behavior where no item in a gelt can be referred to unless it is identified as being at least partially within the area currently held by the gelt.
no_same	If present, will not generate any text if the last time a gelt based substitution was used the exact same location description was generated.
proximal	Value is an additional phrase prepended to the description of a single point if it happens to be directly over some geographic entity. If a number, then this is how close a weather event must be to a location to be considered "OVER" it, in km. The default values are "OVER~" and 3 km. This qualifier is persistent.
proximal2	Just like proximal except it come into effect when the distance is between the distance for proximal and the distance for proximal2. The default values are "NEAR~" and 8 km. This qualifier is persistent.
max_dist	A point more than this far from the location of the weather phenomena will not be referenced. This qualifier is persistent.
interval	If present, a reported time for the weather event is rounded to this many minutes. This qualifier is persistent.
delta	Normally, a `WX' substitution will describe the location of the weather event as it was identified on the last frame with the storm marker. If the `delta' qualifier is present, then this substitution will describe the projected location of the weather event that many minutes in the future. This substitution will not generate text if the resulting time is not within the valid period of the wwa.
used	This qualifier allows one to exclude geographic entities that were previously used to generate text in some other instance of an AREA or WX substitution. There are three main values for this qualifier; `clear', which means empty out the list of previously used entities, `accumulate', which means add entities from this substitution to the list, and `avoid', which means do not generate text for those entities in the list. There are also two hybrid values for this qualifier; `begin', which means clear then accumulate, and `implement' which means avoid than clear.
var	Value is the name of a variable that has assigned to it the text produced here.
sequence	When present, this qualifier activates a feature whereby potentially redundant text can be removed from the items returned. If there is grouping as defined with the group_by qualifier, then redundant text can be removed from all but one item within the group. Any text before a leading `FROM' before any occurrence of `TO' will be removed from all but the first of the group. Any text after any occurrence of `TO' and starting with the occurrence of one of the delimiting strings supplied as arguments to any number of sequence qualifiers will be removed from all but the last of the group. Delimiting strings supplied as arguments beginning with an underscore allow redundant text to be removed from the beginning of an item when it occurs both at the beginning and end of the item. Text after the underscore in this case are strings that must occur in the redundant text for it to be removed.

This section describes how translation control strings work. As mentioned before, each piece of text found in the *.id file of a gelt is broken up into fields by vertical bars. A translation control string allows the

user to intermingle literal text, untranslated text straight from one of the fields of an item of gelt text, or an item of gelt text that is translated somehow. Here is an example of a translation control string:

ABC [1]DEF[2,tuv] HIJ [xyz]

The result of this translation control string will be the literal text "ABC ", followed by the contents of field one, followed by the literal text "DEF", followed by the contents of field 2 acted on by the translation type `tuv', followed by the literal text " HIJ ", followed by the result of translation type `xyz' acting on the whole gelt item. A field index of 99 is treated the same as literal text.

There are several numbers that can be added to the field index that will allow additional flexibility in formatting. Adding 50 to the field index will cause the formatting code to try to get a field from cross reference text. This will only work if a `cross' qualifier is present with the table from which one is generating text. 50 means all text from the cross reference table, 51 means field one from the cross reference table, etc.

The other numbers that can be added to field indices control whether text is generated based on an item's position in a group. Adding 1000 means show this text only if the items current group has exactly one item. Adding 2000 means show this text only if the items current group has more than one item. Adding 3000 means show this text only if there is just one weather point. Adding 6000 means show this text only if there is more than one weather point.

Group positions are referred to as front, back, and mid, referring to the first, last, and anything not first or last, respectively. Additionally, start and end refer to the first and last in the entire lists of items. These are the numbers that can be added to a field index to refer to the various positions in a group:

100 - start or front
200 - start
300 - front
400 - mid
500 - back
600 - end
700 - back or end

If one of these numbers is added to the field index then the item must be in that position in the group for that text to be shown. If the field index is made negative, then the item must not be in that position in the group for that text to be shown. Here is a list of the recognized translation types. For some of them, the text of the gelt item is not actually used.

state This translation attempts to convert an upper case postal abbreviation into a state name. The data for this translation is in the file nationalData/state.abrev.

area This translation attempts to convert a lower case abbreviation of an area of a state into plain language, such as `ne' to `NORTHEAST'. The data for this translation is in the file nationalData/areas.abrev.

county_type This translation attempts to identify the state in question and provide the proper nomenclature for counties or county equivalents (i.e. PARISH). The data for this translation is in the file nationalData/county_type.abrev.

counties_type Same as `county_type' translation except that it will return plural if the number of items returned from the gelt query is more than one.

area_state This translation combines the results of the `state' and `area' translation and attempts to provide text such as `NORTHEAST TEXAS'.

county_area_state This translation combines the results of the `state' `area', and `county_type' translation and attempts to provide text such as `BACA COUNTY IN SOUTHEAST COLORADO'.

clock Provides a clock format description of the local time. Uses the beginning of the wwa for the `AREA' substitution, uses the time of the weather event for a `WX' substitution. This translation type does not use the text of the gelt item.

plain Just like a `clock' translation type except it provides a plain language description of the date and time.

header Just like a `clock' translation type except it provides a header format description of the date and time.

ddhhmm Provides a ddhhmm format description of the gmt time. Uses the beginning of the wwa for the `AREA' substitution, uses the time of the weather event for a `WX' substitution. This translation type does not use the text of the gelt item.

count Returns an aSCII representation of the count of the number of items returned from a gelt query.

gcnt Returns an aSCII representation of the count of the number of items in a group.

index Returns an aSCII representation of the gelt table index of an item. Really only useful in a `sort_by', `group_by' or `unique_by' qualifier.

-index Returns an aSCII representation of the negative of a gelt table index of an item. Really only useful in a `sort_by' qualifier.

gidx Returns an aSCII representation of the position in its group for an item.

itime Returns an aSCII representation of the unix time associated with an item. Really only useful in a `sort_by', `group_by' or `unique_by' qualifier.

-itime Returns an aSCII representation of the negative of the unix time associated with an item. Really only useful in a `sort_by' qualifier.

lat Returns an aSCII representation of the latitude associated with an item. Really only useful in a `sort_by' qualifier.

-lat	Returns an aSCII representation of minus the latitude associated with an item. Really only useful in a `sort_by' qualifier.
lon	Returns an aSCII representation of the latitude associated with an item. Really only useful in a `sort_by' qualifier.
-lon	Returns an aSCII representation of minus the latitude associated with an item. Really only useful in a `sort_by' qualifier.
size	Returns an aSCII representation of the size in hectares of an entity (to the resolution of the gelt grid). Really only useful in a `sort_by' qualifier.
-size	Returns an aSCII representation of the negative of the size in hectares of an entity. Really only useful in a `sort_by' qualifier.
table	Returns an aSCII representation of the order of the `file' qualifier in use within the substitution. Only useful if in accumulate mode and for a `sort_by', `group_by' or `unique_by' qualifier.
-table	Returns an aSCII representation of the negative of the order of the `file' qualifier in use within the substitution. Only useful if in accumulate mode and for a `sort_by' qualifier.
dist	Returns an aSCII representation of the distance from weather event in tenths of km. Really only useful for a `sort_by', `group_by' or `unique_by' qualifier.
-dist	Returns an aSCII representation of the distance from weather event in tenths of km. Really only useful for a `sort_by' qualifier.
azran	Adds description of distance and bearing in miles and degrees meteorological from an entity to the weather event. For zero distance will add proximity descriptor.
azrn0	Adds description of distance and bearing only if distance is greater than zero.
azrn1	Adds description of distance and bearing. Uses proximity descriptor if distance is zero; strips portion of area descriptor otherwise.
azrn2	Adds description of distance and bearing only if distance is greater than zero; strips portion of area descriptor.
azrn3	Describes distance and bearing; uses proximity descriptor if distance is zero.
azrn4	Describes distance and bearing only if distance is greater than zero.
county_count	Returns an aSCII representation of the count of the number of items returned from a gelt query, followed by the same output one would get from the `counties_type' translation.
alpha	Removes all non-alphabetic characters.

S Blank if the item count is less than two, otherwise returns "S".

s Blank if the item count is less than two, otherwise returns "s".

2.5.1. Headline Time Phrase Settings

To use the described time phrase functionality a template file changes is necessary if not already done in OB2 WWA.

(OB1 or Lower):

<PHRASE | 6hour>

(OB2-OB3):

<PHRASE|warningAdvisory> or **<PHRASE|watch>**

<AREA |file=wwa_timezone |area=wwa_zones |timezone>

2.5.2. Product ID's

When first configuring WarnGen & IFPS it is important to make sure that the product ids which WarnGen passes to the wwaServer are consistent with the actual ids of the local office. This use to apply to WWA prior to OB2 however OB2 WWA no longer uses the wwaServer, where WarnGen & IFPS continue its use.

To Verify the Product ID:

1. Open an xterm window on either lx1 or lx2
2. Log into ds1:
   rlogin ds1
3. Change to the log directory by typing
   logs
4. Determine the most recent wwaServer log file by typing
   ll -t wwaServer*
5. Read the last few lines of the latest log file:
   tail -f <wwaServer file name**>**
6. Launch the WWA application if not already active:
   Select from desktop menu bar
7. Generate a product using both WWA and WarnGen. A new line will appear in the log file viewable from the step conducted in line 5.
8. Verify that the product ID after ".productId" matches what you would expect. If the product ID does not match read the *Inconsistent Product ID* section below step 12.

9. Stop the tail operation active in the xterm window by typing:
ctrl-c

10. Exit the DS1 login by typing:
exit

11. Close the xterm window by typing:
exit

12. Close the WWA application by selecting the *Exit* button located on the bottom right of the WWA monitor.

Inconsistent Product ID:

WWA & WarnGen uses the following for the IDs which are passed to the server:

${CCC} NNN ${XXX}, where CCC and XXX are defined in /awips/fxa/data/localization/<site>/<site>-mainConfig.txt. If these are incorrect, look below on how to change them. NNN is defined in the template file for each product (/awips/fxa/data/localization/nationalData/wwa*.preWWA). Within the WarnGen templates there is a substitution called AUX_INFO. The AUX_INFO substitution specifies the details of the hazard so that the product is stored in the WWA database. One of the fields is "issue_prod". Look at this field to verify that NNN is correct (Note: $cccValue! and $xxxValue! will be expanded based on CCC and XXX as defined above).

Note: Just saving the product will cause the issued flag to be switched if the product is saved under the official ID. If a forecaster wants to modify a product and save it prior to sending it out they should save the product under the work ID and then switch the ID prior to sending the product out.

AUX_INFO substitution Example:

<AUX_INFO |geo_decriptor=1 |wwa_type = 3 |wx_hazard=Winter Storm |specific_hazard=Snow|issue_prod=$$cccValue!WSW$$xxxValue >

geo_descriptor:	1 (for a zone based product), 2 (for a county based product)
wwa_type:	1 (for a watch), 2 (for a warning), 3 (for an advisory), 4 (for a statement)
wx_hazard:	The weather hazard as found in the WWA Admin application
specific_hazard:	The specific wx hazard as found in the WWA Admin application
issue_prod:	$$cccValue!NNN$$xxxValue!

If not specified in the template file, geo_descriptor defaults to 2 and wwa_type defaults to 2. If the AUX_INFO substitution is not included in the warnGen template, then WWA will never recognize the warnGen product, If the entries in AUX_INFO don't exactly match an entry in the characteristics table, then the product will remain unissued in the WWA Monitor, and NWR messages will not be generated.

WWA and WarnGen use the following for the IDs which are formatted in the text:

$$cccValue!NNN$$xxxValue! is used in the text template at the appropriate spot in the header. NNN is defined in each text template dependant upon the type of product. $$cccValue! and $$xxxValue! are defined by ${CURRENT_CWA}-offtIncl.txt which is further defined by CCC

and XXX values in /awips/fxa/data/localization/<site>/<site>-mainConfig.txt. If these are incorrect, look below for the method to correct them.

If CCC or XXX needs to be changed:
CCC and XXX are defined in /awips/fxa/data/localization/<site>/<site>-mainConfig.txt. This file will only have CCC defined initially. The software defaults to $FXA_LOCAL_SITE for XXX if XXX is not defined in <site>-mainConfig.txt. Place a copy of /awips/fxa/data/localization/<site>/<site>-mainConfig.txt in /data/fxa/customFiles so that your changes are not overwritten during the next install. Also, this location is viewable from all workstations so the changes do not need to be pushed out to all workstations. Change the value after @@@CCC as needed, and if XXX needs to be changed, then at the end of the file, add the following line: @@@XXX KKK where KKK is the value you wish to be used as the XXX substitution. Note that XXXL and XXXR are not related to this issue, so a specific XXX line must be added. If the issue_prod needs to be modified, copy the template to /data/fxa/customFiles and make the necessary changes. If either file is changed you will need to do a "wwa" localization as defined in section 2.6 of this document.

2.6. WWA Localization

This section describes localization as it relates to WWA. Localization uses the preWWA files in the /data/fxa/customFiles directory or /awips/fxa/data/localization/nationalData directory to create the template (.wwaProd) files, which are stored in /awips/fxa/data/localizationDataSets/CCC (CCC - Site id). When localization is run the script makeWWAtables.csh is responsible for making site specific WWA template files. The script constructs the template files by making substitutions in the preWWA files. The variables to be substituted in the preWWA files are preceded by three at symbols "@@@". The script replaces these variables with the site specific definition of that variable. This allows for substitutions such as state and state abbreviations to be correctly formatted for each site when localization is run. For example, the variable "@@@1" in the sls_county_block.template file will be replaced with the state abbreviation. Once all the substitutions are completed the file extensions are changed to ".wwaProd" and are placed into the site's localization directory.

mainScript.csh **-WWA**: performs the following localization tasks: dataSups clipSups scales tables text maps wwa station.

mainScript.csh **-wwa**: localizes template files for WWA, WarnGen, NWR, and will create the appropriate GELT files for these programs.

Steps to run WWA localization:

1. Open an xterm window on lx1.

2. Login as user fxa:
   su -l fxa
   <enter fxa password when prompted>

3. Run WWA localization by typing:
   /awips/fxa/data/localization/scripts/mainScript.csh -WWA

4. Exit fxa login session, and xterm window by typing:
   exit
   exit

5. Repeat steps 1 through 4 for lx2

Steps to run WWA localization for NWR template files:

1. Open an xterm window on lx1 or lx2.

2. Login as user fxa:
   su -l fxa
   <enter fxa password when prompted>

3. Remotely connect to DS1 by typing:
   rlogin ds1
   <enter password *if* prompted>

4. Run WWA localization by typing:
   /awips/fxa/data/localization/scripts/mainScript.csh -wwa

5. Exit DS1 login session, fxa user session, and xterm window by typing:
   exit
   exit
   exit

2.7. WWA Site Backup

With the switch to independent localizations for site backup WFOs can define how products are generated while in backup mode. The first option is to utilize local template files while backing up another WFO or to use template files retrieved from the primary/secondary backup sites. In either case it may be necessary to define separate WWA template files for the local, primary, and secondary backup sites as part of the independent localization process. The following steps suggest different methods to configure WWA for site backup procedures.

A. Use Primary/Secondary Backup Site Template Files (recommended):

This is the recommended method since you will be using the actual "customized" template files from the primary and secondary backup sites. This means you will won't have to worry about any "hardwired" local syntax (in CTA statements, body of text etc...), and generated products will look exactly as the backup sites keeping consistency in product format (including CTA statements, headline formats etc...).

1. Contact the primary and secondary backup sites and retrieve the prepared tar file containing their WWA template files.

2. Open an xterm window on lx1.

3. Login as user fxa:
   su -l fxa
   <enter fxa password when prompted>

4. Create a temp directory in /tmp by typing:
   mkdir /tmp/wwa

5. Copy the of the primary .tar file into to the newly created *wwa* directory by typing:
   cp <*path*>/*CCC*-WWATemplates.tar /tmp/wwa ← CCC = backup site & path = file location

6. Change into new *wwa* directory:
   cd /tmp/wwa

7. Uncompress the tar file by typing:
   tar -xvf *CCC*-WWATemplates.tar ← CCC = backup site id

8. Rename each template file to begin with CCC- which can be done by typing:
   mv <*name*>.preWWA *CCC*-<*name*>.preWWA ← name = file name & CCC = backup site id

9. Edit each template to remove any local defined fields or to adjust fields to better represent the site being backed up.
   - Such fields could be hardwired local site ids, CTA statements etc...
   pico *CCC*-<*name*>.preWWA ← CCC = backup site id & name = file name

10. Once the template files have been prepared move each template to the *customFiles* directory by typing:
    mv *CCC*-*.preWWA /data/fxa/customFiles ← CCC = backup site id

11. Repeat steps 5 through 10 for the secondary backup site.

12. Delete wwa directory by typing:
    cd
    rmdir /tmp/wwa

13. Run WWA lx1 localization by typing (CCC = backup site id):
    ***/awips/fxa/data/localization/scripts/mainScript.csh* -WWA CCC**

14. Remotely connect to lx2 by typing:
    rlogin lx2
    <enter password *if* prompted>

15. Run WWA lx2 localization by typing (CCC = backup site id):
    ***/awips/fxa/data/localization/scripts/mainScript.csh* -WWA CCC**

16. Exit lx2 login session, fxa user session, and xterm window by typing:
    exit
    exit
    exit

B. Use Local Site Defined Template Files For Site Backup:

This method will use your local template files for the backup sites however they will be separated into primary and secondary template files. This will allow you to maintain any unique fields for the local site as well as for the backup sites (once editing is complete). In other words the backup site template files will be primed off your templates so the local CTA statements will be used, headline formats, framing etc... A word of

caution any locally unique fields added to your custom template files will be carried over to the template files used in the backup process so be sure these are changed before going operational (EG...some sites hardwire their site id's, area info, and much more into local templates)

1. Open an xterm window on lx1.

2. Login as user fxa:
   su -l fxa
   <enter fxa password when prompted>

** Primary Site Backup Steps **

3. Create a temp directory in /tmp by typing:
   mkdir /tmp/WWAPrimary

4. Copy all local template files from the *customFiles* directory to the newly created *WWAPrimary* directory by typing (sites using nationalData files should copy from /awips/fxa/data/localization/nationalData):
   cp /data/fxa/customFiles/WWA_*.preWWA /tmp/WWAPrimary

5. Change into new *WWAPrimary* directory:
   cd /tmp/WWAPrimary

6. Rename each template file to begin with CCC- which can be done by typing:
   mv <*name*>.preWWA *CCC*-<*name*>.preWWA ← name = file name & CCC = primary backup site id

7. Edit each template to remove any local defined fields or to adjust fields to better represent the site being backed up.
   - Such fields could be hardwired local site ids, CTA statements etc...
   pico *CCC*-<*name*>.preWWA ← CCC = primary backup site id & name = file name

8. Once the primary backup site templates have been prepared move each template to the *customFiles* directory by typing:
   mv *CCC*-*.preWWA /data/fxa/customFiles ← CCC = primary backup site id

** Secondary Site Backup Steps **

9. Create a temp directory in /tmp by typing:
   mkdir /tmp/WWASecondary

10. Copy all local template files from the *customFiles* directory to the newly created *WWASecondary* directory by typing (sites using nationalData files should copy from /awips/fxa/data/localization/nationalData):
    cp /data/fxa/customFiles/WWA_*.preWWA /tmp/WWASecondary

11. Change into new *WWASecondary* directory:
    cd /tmp/WWASecondary

12. Rename each template file to begin with CCC- which can be done by typing:
    mv <*name*>.preWWA *CCC*-<*name*>.preWWA ← name = file name & CCC = secondary backup site id

13. Edit each template to remove any local defined fields or to adjust fields to better represent the site being backed up.
    - Such fields could be hardwired local site ids, CTA statements etc...

    pico *CCC-<name>*.preWWA ← CCC = secondary backup site id & name = file name

14. Once the secondary backup site templates have been prepared move each template to the *customFiles* directory by typing:

    mv *CCC*-*.preWWA /data/fxa/customFiles ← CCC = secondary site id

15. Delete *WWAPrimary* and *WWASecondary* directories by typing:

    cd
    rmdir /tmp/WWAPrimary
    rmdir /tmp/WWASecondary

16. Run WWA lx1 localization by typing (CCC = secondary site id):

    ***/awips/fxa/data/localization/scripts/mainScript.csh -WWA* CCC**

17. Remotely connect to lx2 by typing:

    rlogin lx2
    <enter password *if* prompted>

18. Run WWA lx2 localization by typing (CCC = secondary site id):

    ***/awips/fxa/data/localization/scripts/mainScript.csh -WWA* CCC**

19. Exit lx2 login session, fxa user session, and xterm window by typing:

    exit
    exit
    exit

C. Use Local Site's Template Files For Site Backup:

This method will uses your local template files for the backup sites exactly as you've defined them. A word of caution any locally unique fields added to your custom template files will also be used when site backup is performed (EG...some sites hardwire their site id's, area info, and much more into local templates)

There is no special step like in method A and B to use your local template files. If the actions mentioned in method A or B are not done then by default your local template files will be used in the site backup process. In other words *CCC-<name>*.preWWA was not defined.

Prepare Local Template files For Another WFO:

1. Open an xterm window on lx1.

2. Login as user fxa:

    su -l fxa
    <enter fxa password when prompted>

3. Change into customFiles directory by typing:

    cd /data/fxa/customFiles

4. Compress WWA Template files by typing:

    tar -cvf *CCC*-WWATemplates.tar wwa_*.preWWA ← CCC = local site id

5. The local template files are now prepared if backup sites request these files.

4. Exit fxa session and xterm window by typing:
   exit
   exit

2.8. Watch by County / Watch County Notification backup

The OB3 install will automatically configure the WWA WBC/WCN backup function and set workstation1 as the default location where generated WCN products will display to the forecaster. To change the workstation where this product is displayed see section 2.3.1. The backup list referenced by WWA was compiled from regional input as is as follows:

```
# File name: prim_sec_bak.txt
# WFO Data File
# This file is a list of WFOs' primary and secondary backup sites
# Baseline (Local) Site ID | Primary Backup Site ID | Secondary Backup Site ID
# Currently being used by wou_conf.sh, which supports the wcn/wou backup for wwa.

ABQ|EPZ|AMA
AMA|LUB|ABQ
BMX|FFC|HUN
BRO|LCH|EWX
CRP|EWX|HGX
EPZ|ABQ|MAF
EWX|CRP|BRO
EYW|MFL|JAX
FFC|BMX|MRX
FWD|SHV|OUN
HUN|JAN|BMX
HGX|LCH|CRP
JAN|HUN|SHV
JAX|TAE|EYW
LCH|HGX|LIX
LIX|MOB|LCH
LUB|AMA|SJT
LZK|MEG|TSA
MAF|SJT|EPZ
MEG|LZK|OHX
MFL|EYW|TBW
MLB|TBW|SJU
MOB|LIX|TAE
MRX|OHX|FFC
OHX|MRX|MEG
OUN|TSA|FWD
SJT|MAF|LUB
SJU|MFL|MLB
SHV|FWD|JAN
TAE|JAX|MOB
TBW|MLB|MFL
TSA|OUN|LZK
AKQ|MHX|RAH
ALY|BTV|BGM
BGM|CTP|ALY
BOX|OKX|GYX
BTV|ALY|CAR
BUF|CLE|PBZ
CAE|GSP|CHS
CAR|GYX|BTV
CHS|ILM|CAE
CLE|BUF|ILN
CTP|BGM|LWX
GSP|CAE|RNK
GYX|CAR|BOX
ILM|CHS|MHX
ILN|JKL|CLE
JKL|ILN|RLX
LWX|PHI|CTP
MHX|AKQ|ILM
OKX|BOX|PHI
PBZ|RLX|BUF
PHI|LWX|OKX
RAH|RNK|AKQ
RLX|PBZ|JKL
RNK|RAH|GSP
GGW|BYZ|TFX
BYZ|GGW|RIW
TFX|MSO|GGW
MSO|TFX|OTX
PIH|BOI|SLC
BOI|PIH|PDT
OTX|PDT|MSO
PDT|SEW|BOI
SEW|PQR|OTX
PQR|SEW|MFR
MFR|EKA|PQR
EKA|MFR|MTR
STO|HNX|MTR
MTR|LOX|EKA
HNX|STO|SGX
LOX|SGX|MTR
SGX|LOX|HNX
PSR|TWC|VEF
TWC|PSR|FGZ
FGZ|PSR|VEF
VEF|REV|LKN
REV|LKN|STO
LOT|MKX|ILX
BOU|PUB|CYS
DMX|DVN|OAX
DTX|GRR|APX
DLH|MPX|FGF
DDC|GLD|ICT
APX|MQT|GRR
GLD|DDC|PUB
FGF|BIS|DLH
GJT|SLC|RIW
GRR|DTX|APX
GRB|MQT|MKX
GID|OAX|LBF
IND|LMK|IWX
JKL|ILN|LMK
EAX|SGF|TOP
ARX|MPX|MKX
MQT|APX|GRB
MKX|LOT|GRB
MPX|ARX|DLH
IWX|GRR|IND
LBF|UNR|GID
OAX|GID|FSD
PAH|LSX|LMK
PUB|BOU|GJT
DVN|DMX|ARX
UNR|LBF|BIS
RIW|CYS|BYZ
LSX|EAX|SGF
FSD|ABR|MPX
SGF|LSX|PAH
TOP|ICT|EAX
ICT|TOP|DDC
LKN|REV|SLC
SLC|GJT|FGZ
ABR|FSD|UNR
BIS|FGF|ABR
ILX|DVN|LOT
CYS|RIW|BOU
```

2.9. Public Zone Configuration

- Retrieve the necessary data files from NOAA1 On the ds1 as ifps
  - **cd /awips/adapt/ifps/data**
  - **ftp 165.92.25.15**
    - **Log in as user ftp**
    - **enter your email address as a password when prompted**
    - **binary**
    - **hash**
    - **cd /pub/maps**
    - **ls bp*.dbx**
    - **mget bp*.dbx (retrieve only the most up-to-date file)**
    - **ls *.bp**
    - **mget cn*.bp (retrieve only the most up-to-date file)**
    - **mget mp*.bp (retrieve only the most up-to-date file)**
    - **ls z*.dbf**
    - **mget z*.dbf (retrieve only the most up-to-date file)**
    - **ls z*shp.Z**
    - **mget z*.shp.Z (retrieve only the most up-to-date file)**
    - **ls z*.shx**
    - **mget z*.shx (retrieve only the most up-to-date file)**
    - **(Note: The z*.dbf, z*shp.Z, and z*.shx files should all have the same date in order to insure consistency.)**
    - **bye**

- IMPORTANT: Check your office to make sure that all instances of IFPS and WWA have been shut down. Running IFPS or WWA during the following steps could damage your digital data and/or configuration!

- Place the shapefiles in their proper location (the dates below are examples...use your filenames):
  - **rlogin lx1**
  - **cd /awips/GFESuite/data/maps**
  - **cp /awips/adapt/ifps/data/z_31jl02.dbf .**
  - **cp /awips/adapt/ifps/data/z_31jl02.shp.Z .**
  - **cp /awips/adapt/ifps/data/z_31jl02.shx .**
  - **uncompress z_31jl02.shp.Z**
  - **gzip -9 z_31jl02.dbf**
  - **gzip -9 z_31jl02.shp**
  - **gzip -9 z_31jl02.shx**
  - **chmod 644 z_31jl02***

- Now you need to create a localMaps.py file to tell the GFESuite software that you want to use the new map. From your text editor, create/update a localMaps.py file in both lx1 and lx2 in the following directory:
  - **/awips/GFESuite/etc/SITE**

- Assuming you have the default map configuration had haven't done any other overrides, the content of your new localMaps.py file will contain the following (syntax is paramount!). Do this on both lx1 and lx2: (Note: the dates in the filenames in this step are examples only; you should use dates corresponding to the files you downloaded.)
  - **from Maps import ***
  - **CWAzones.filename('z_31jl02')**
  - **Zones.filename('z_31jl02')**

6. Repeat Steps 2, 3, and 4 on lx2. This time, use 'mv' instead of 'cp' in step 2.

7. On lx1 as user ifps, stop the ifpServer and restart it. This will force the ifpServer to recognize that the map shapefiles have changed, and thus will automatically recreate the map backgrounds as well as the edit areas.

8. Rename the remaining files to the correct filename
   - **exit (returns you to ds1 in /awips/adapt/ifps/data)**
   - **mv bp*.dbx national_dbx.unl**
   - **mv mp*.bp zone.bpf**
   - **mv cn*.bp county.bpf**

9. Set up the CWA Change directory area
   - **If /awips/adapt/ifps/cwachange already exists:**
     - **rm /awips/adapt/ifps/cwachange/tmp/***
   - **If /awips/adapt/ifps/cwachange does not already exist:**
     - **mkdir /awips/adapt/ifps/cwachange**
     - **mkdir /awips/adapt/ifps/cwachange/tmp**
     - **mkdir /awips/adapt/ifps/cwachange/backup**

10. Disable Database Triggers
    - **On the ds as user ifps:**
    - **. /awips/adapt/ifps/localbin/ifps-ccc.env (where ccc = WFO id)**
    - **export TERM=vt100**
    - **dbaccess ifps_ccc (where ccc=wfo id)**
    - **[Q]uery Language**
    - **[N]ew**
    - **SET TRIGGERS FOR geography_directry DISABLED;**
    - **< esc >**
    - **[R]un**
    - **[E]xit (twice)**

11. Run the CWA change script to configure the appropriate zones for your local office
    - **On the lx as ifps, launch the config_ifps application**
      - **where # is the number of the workstation where you are working.)**
        - **Open a telnet session and login as root.**
          setenv DISPLAY lx#:0.0 OR
          setenv DISPLAY lx#:0.1
        - **unless in the bourne shell then do:**
          export DISPLAY=lx#:0.0 OR
          export DISPLAY=lx#:0.1
        - **Set X permissions:**
          xhost +
        - **Substitute user ifps.**
          su - ifps
          <password>
        - **Type: stty erase <backspace>**
        - **Set the environmental variable DISPLAY:**
          export DISPLAY=lx#:0.0 OR
          export DISPLAY=lx#:0.1
        - **Type: cd /awips/adapt/ifps/bin/linux**
        - **Launch the IFPS configuration utility:**
          ./config_ifps ccc (where ccc is your site ID.)
    - **Select the "CWA Change" button**
    - **select "G" for "Go to Main Menu"**
    - **select "P" for "Update Public CWA Data"**
    - **<Public CWA configuration scripts run>**
    - **Select "E" for "End This Program"**

11a. [ONLY if you have added/removed a ZONE from your local WFO via this script] Create default combo map for current forecast cycle.

- **rlogin lx1**
- **. /awips/adapt/ifps/localbin/ifps-ccc.env (where ccc = WFO id)**
- **./make_default_combos -s ccc -t yyyymmddcc -a public_combo_map -d ifps_ccc -f $IFPS_DATA/combo_prefs.ccc/public_default_combos.ccc**

(Where yyyymmddcc=year, month, day, cycle (00 or 12) of the current cycle (e.g. 2002052812); and where ccc=wfo ID (lower case). Note that the ccc is located in 4 places in this command.)

- **exit (returns to ds1)**

12. Re-Enable Database Triggers

- **On the ds, as user ifps:**
- **. /awips/adapt/ifps/localbin/ifps-ccc.env (where ccc=wfo id)**
- **export TERM=vt100**
- **dbaccess ifps_ccc (where ccc = WFO id)**
- **[Q]uery Language**
- **[N]ew**
- **SET TRIGGERS FOR geography_directry ENABLED;**
- **< esc >**
- **[R]un**
- **[E]xit (twice)**

13. Create Climatology Data

In most cases, climatology data will not be present for new zones added as part of the CWA Change process. If new zones were added to YOUR WFO, you will need to create the climatology data. For instruction go to section 2.12.

14. Update zone/county-to-NWR Tower lists

When zones are added to your WFO or a neighbor's WFO, they will often fall under one or more of your NWR Towers' broadcast areas. Since it is difficult or impossible for the CWA Change scripts to determine which towers the new zone belongs to, this step must be done manually.

<u>To add zones to a zone/county-to-NWR Tower list</u>:

- **Step 1: Launch config_ifps**
  - **where # is the number of the workstation where you are working.)**
    - **Open a telnet session and login as root.**
      setenv DISPLAY lx#:0.0 OR
      setenv DISPLAY lx#:0.1
    - **unless in the bourne shell then do:**
      export DISPLAY=lx#:0.0 OR
      export DISPLAY=lx#:0.1
    - **Set X permissions:**
      xhost +
    - **Substitute user ifps.**
      su - ifps
      <password>
    - **Type: stty erase <backspace>**
    - **Set the environmental variable DISPLAY:**

export DISPLAY=lx#:0.0 OR
export DISPLAY=lx#:0.1

- **Type: cd /awips/adapt/ifps/bin/linux**
- **Launch the IFPS configuration utility:**
  ./config_ifps ccc (where ccc is your site ID.)

- **Step 2: Select Foundation Software from the Configure IFPS Menu.**
- **Step 3: Select Establish Geographic Settings from the Configure Foundation Software Menu.**
  - **This will bring up the Config Geo**
  - **Set the Mode selector bar to Single.**
  - **Set the Geography selector bar to Radio Towers.**
  - **Select an NWR Tower ID from the Group selector bar.**
  - **To add a zone to that tower, select it on the map, then click on the Add button.**
  - **Repeat this step for each zone you wish to add to the tower's broadcast area.**
  - **Select the next NWR Tower ID from the Group selector bar to modify the zones associated with that tower.**
  - **Repeat for all towers if desired.**

15. Public Zones should be reconfigured

After this has been done, verify that GFE, ICS, IGR, and WWA launch and the maps look correct in all these applications. Be sure to check both the zone and county maps in WWA. Also, verify that your ZFP is formatted correctly and contains all the zones you expect it to contain.

2.10. Marine Zone Configuration

1. Retrieve the necessary data files from NOAA1 on the ds1 as ifps
   - **cd /awips/adapt/ifps/data**
   - **ftp 165.92.25.15**
   - **Log in as user ftp**
   - **enter your email address as a password when prompted**
   - **binary**
   - **hash**
   - **cd /pub/maps**
   - **ls bp*.dbx**
   - **mget bp*.dbx (retrieve only the most up-to-date file)**
   - **ls *.bp**
   - **mget cn*.bp (retrieve only the most up-to-date file)**
   - **mget mp*.bp (retrieve only the most up-to-date file)**
   - **bye**

2. Rename the files to the correct filename
   - **mv bp*.dbx national_dbx.unl**
   - **mv mp*.bp zone.bpf**
   - **mv cn*.bp county.bpf**

3. IMPORTANT: Check your office to make sure that all instances of IFPS and WWA have been shut down. Running IFPS or WWA during the following steps could damage your digital data and/or configuration!

4. Set up the CWA Change directory area
   - **If /awips/adapt/ifps/cwachange already exists**
     - **rm /awips/adapt/ifps/cwachange/tmp/***
   - **If /awips/adapt/ifps/cwachange does not already exist:**
     - **mkdir /awips/adapt/ifps/cwachange**
     - **mkdir /awips/adapt/ifps/cwachange/tmp**
     - **mkdir /awips/adapt/ifps/cwachange/backup**

5. Disable Database Triggers
   - **On the ds as user ifps:**
   - **. /awips/adapt/ifps/localbin/ifps-ccc.env (where ccc = WFO id)**
   - **export TERM=vt100**
   - **dbaccess ifps_ccc (where ccc=wfo id)**
   - **[Q]uery Language**
   - **[N]ew**
   - **SET TRIGGERS FOR geography_directry DISABLED;**
   - **< esc >**
   - **[R]un**
   - **[E]xit (twice)**

6. Run the CWA change script to configure the appropriate marine zones for your local office
   - **On the lx as ifps, launch the config_ifps application**
     - **where # is the number of the workstation where you are working.)**
       - **Open a telnet session and login as root.**
         setenv DISPLAY lx#:0.0 OR
         setenv DISPLAY lx#:0.1
       - **unless in the bourne shell then do:**
         export DISPLAY=lx#:0.0 OR
         export DISPLAY=lx#:0.1
       - **Set X permissions:**
         xhost +
       - **Substitute user ifps.**
         su - ifps
         <password>
       - **Type: stty erase <backspace>**
       - **Set the environmental variable DISPLAY:**
         export DISPLAY=lx#:0.0 OR
         export DISPLAY=lx#:0.1
       - **Type: cd /awips/adapt/ifps/bin/linux**
       - **Launch the IFPS configuration utility:**
         ./config_ifps ccc (where ccc is your site ID.)
   - **Select the "CWA Change" button**
   - **select "G" for "Go to Main Menu"**
   - **select "M" for "Update/Generate Marine Site Specific Data"**
   - **<marine config scripts run>**
   - **Select "E" for "End This Program"**

7. Re-Enable Database Triggers
   - **On the ds, as user ifps:**
   - **. /awips/adapt/ifps/localbin/ifps-ccc.env (where ccc=wfo id)**
   - **export TERM=vt100**
   - **dbaccess ifps_ccc (where ccc = WFO id)**
   - **[Q]uery Language**
   - **[N]ew**
   - **SET TRIGGERS FOR geography_directry ENABLED;**
   - **< esc >**
   - **[R]un**
   - **[E]xit (twice)**

8. Enter the marine station (buoys, C-MAN stations, etc.) information into the database
    - **Launch the config_ifps application to start the Config Geo program**
        - **where # is the number of the workstation where you are working.)**
            - **Open a telnet session and login as root.**
              setenv DISPLAY lx#:0.0 OR
              setenv DISPLAY lx#:0.1
            - **unless in the bourne shell then do:**
              export DISPLAY=lx#:0.0 OR
              export DISPLAY=lx#:0.1
            - **Set X permissions:**
              xhost +
            - **Substitute user ifps.**
              su - ifps
              <password>
            - **Type: stty erase <backspace>**
            - **Set the environmental variable DISPLAY:**
              export DISPLAY=lx#:0.0 OR
              export DISPLAY=lx#:0.1
            - **Type: cd /awips/adapt/ifps/bin/linux**
            - **Launch the IFPS configuration utility:**
              ./config_ifps ccc (where ccc is your site ID.)
    - **Select the "Foundation Software" button**
    - **Select the "Add Station or Tower" button**
    - **In the resulting window, enter the following information:**
        - **marine station ID (e.g. CHLV2)**
        - **"S" for Station**
        - **<latitude> = The latitude of the marine station. For example: 36.9002**
        - **<longitude> = The longitude of the marine station. For example: 75.7099**
        - **"Y" to add this station to the table, "N" to discard the station**
    - **If you wish to add another station, answer "Y" to the prompt. You'll then be prompted for the next station ID, and you can repeat the above process. If you answer "N", you'll be asked to commit your new stations to the IFPS database. If you answer "Y", they'll be added. If you answer "N", they'll be discarded. You'll then be returned to the "Foundation Software" Configuration GUI.**

9. Use the config_geo program to complete the marine station configuration
    - **From the "Foundation Software" GUI, select the "Establish Geographic Settings" button.**
    - **The config_geo program should start**
        - **Change the mode to "Station"**
        - **Select Marine station id added above**
        - **Complete the station name, timezone, parent marine zone, and all lat/lon information**
        - **Select the "Save Changes" button at the bottom of the Config Geo program**
        - **Repeat for all the marine stations**
    - **Change the Mode to "Group"**
    - **Change the Geography to "Stations"**
    - **Select "Add Group..." at the bottom of the GUI**
        - **Group name is "marine_stn_dfm"**
        - **WFO is your 3 letter site id (in capital letters)**

- **Description is a description of the field (e.g. Marine Station DFM identifiers)**
- **First Geo-ID is the first station id in the list (e.g. CHLV2)**
- **Select OK once all the fields are completed**

- **A new group called marine_stn_dfm with one station assigned to it will be created**
- **Add additional stations**
  - **Fill in the Geo-ID and member value (increment the value by 1)**
  - **Select "Add"**
  - **Repeat as necessary**
- **Select File->Exit from Config Geo**
- **Select the OK button twice to exit the IFPS Configuration GUI**

10. Configure the grid to marine station mapping for the newly added marine stations

- **Step 1: Obtain latitude/longitude pairs for all points (or stations) for which your WFO produces forecasts. Keep in mind that the stations are listed in the geography groups under "stn_dfm", "marine_stn_dfm" and "fwx_stn_dfm". It is a good idea to include your neighboring WFOs stations in this list as well for office backup purposes.**

An example of obtaining such a list from Wakefield (AKQ) WFO database is as follows:

- **su ifps**
  <enter password>
- **. /awips/adapt/ifps/localbin/ifps-ccc.env**
- **echo "select 'K'||geo_id, lat_cntr, -lon_cntr**
  **from geography_directry where geo_id in **
  (select geo_id from geography_groups where geo_list in
  **('stn_dfm','marine_stn_dfm','fwxstn_dfm'))" **
  | $INFORMIXDIR/bin/dbaccess ifps_akq >
  /tmp/station_list.txt
- **cat /tmp/station_list.txt**

(expression) lat_cntr (expression)

KCHLV2 36.90000200000 -75.7099990000

KDUCN 36.18000000000 -75.7500000000

KECG 36.27000000000 -76.1800000000

KORP 36.90000200000 -76.1999970000

KRIC 37.50000000000 -77.3300020000

KSBY 38.33000200000 -75.5000000000

Or you could just use config_ifps's Configure Geography GUI and look at the lat_cntr, lon_cntr fields for each station and obtain the information that way.

- **Step 2: With the list of stations in hand, log in as user 'SITE'(important!) and start GFE. Underneath the "Maps"->"Samples" menu start the "Define by Lat/Long" GUI and**

input each station's latitude/longtitude (remember that longtitude is negative in the Western Hemisphere). A '+' should appear at the latitude and longtitude specified.

- **Step 3: Now using the Draw Edit Area Tool, carefully enclose a station '+', making sure that at least one gridpoint is enclosed within it.**
- **Step 4: Now save the edit area. The station edit area must be named with a capital 'K' prefixed to the station's identifier all in upper-case letters. For example, Richmond, VA (RIC) edit areais "KRIC".**
- **Step 5: Repeat steps 3 and 4 for each station '+'.**
- **Step 6: You are done. Your new point edit areas should be located under the Edit Area->Misc menu in GFE.**

Once completed, the grid unloader will now know what gridpoint(s) to sample for creating these point forecast DFMs.

11. Marine Zone and Station Configuration is now complete.

2.11. Fire Weather Zone Configuration

1. Retrieve the necessary data files from NOAA1
   - **On the ds1 as ifps:**
   - **cd /awips/adapt/ifps/data**
   - **ftp 165.92.25.15**
     - **Log in as user ftp**
     - **enter your email address as a password when prompted**
     - **binary**
     - **hash**
     - **cd /pub/maps**
     - **ls bp*.dbx**
     - **mget bp*.dbx (retrieve only the most up-to-date file)**
     - **ls fz*.dbx**
     - **mget fz*.dbx (retrieve only the most up-to-date file)**
     - **ls fz*.bp**
     - **mget fz*.bp (retrieve only the most up-to-date file)**
     - **ls fz*.dbf**
     - **mget fz*.dbf (retrieve only the most up-to-date file)**
     - **ls fz*.shp**
     - **mget fz*.shp (retrieve only the most up-to-date file)**
     - **ls fz*.shx**
     - **mget fz*.shx (retrieve only the most up-to-date file)**
     - **bye**

2. IMPORTANT: Check your office to make sure that all instances of IFPS and WWA have been shut down. Running IFPS or WWA during the following steps could damage your digital data and/or configuration!

3. Place the shapefiles in their proper location:
   - **rlogin lx1**
   - **cd /awips/GFESuite/data/maps**
   - **cp /awips/adapt/ifps/data/fz*.dbf .**
   - **cp /awips/adapt/ifps/data/fz*.shp .**
   - **cp /awips/adapt/ifps/data/fz*.shx .**

- **gzip -9 fz*.dbf**
- **gzip -9 fz*.shp**
- **gzip -9 fz*.shx**
- **chmod 644 fz***

4. Update your localMaps.py file:
   - **cd /awips/GFESuite/etc/SITE**
   - **NOTE: The 'fz28my02' in this step is only an example! Please be sure to use the day/month/year that is the name of the fz*.dbf, fz*.shp, and fz*.shx files you just downloaded.**
   - **Using your favorite editor, edit/create localMaps.py to include:**

```
from Maps import *

FireWxZonesName = 'fz28my02'

# Fire Wx Zones
FWCWAzones = ShapeFile(MAPDIR)
FWCWAzones.filename(FireWxZonesName)
FWCWAzones.filter(lambda x : x['CWA'] == CWA)
FWCWAzones.name = 'FireWxZones_' + CWA
FWCWAzones.editAreaName = ['STATE','ZONE']
FWCWAzones.groupName = 'FireWxZones'
maps.append(FWCWAzones)

# Unfiltered Fire Wx Zones
FWZones = ShapeFile(MAPDIR)
FWZones.filename(FireWxZonesName)
FWZones.name = 'FireWxZones'
maps.append(FWZones)
```

   - **exit (returns to ds1)**

5. Repeat Steps 2-3 on lx2
   - Move (mv) the files in step 3 instead of doing a Copy (cp)
   - The localMaps.py file may be rcp'd from lx1 if you wish

6. Rename the remaining files to their correct filenames
   - **mv bp*.dbx national_dbx.unl**
   - **mv fz*.dbx national_fwxdbx.unl**
   - **mv fz*.bp fwx.bpf**

7. Set up the CWA Change directory area
   - **If /awips/adapt/ifps/cwachange already exists:**
     - **rm /awips/adapt/ifps/cwachange/tmp/***
   - **if /awips/adapt/ifps/cwachange does not already exist:**
     - **mkdir /awips/adapt/ifps/cwachange**
     - **mkdir /awips/adapt/ifps/cwachange/tmp**
     - **mkdir /awips/adapt/ifps/cwachange/backup**

8. Disable Database Triggers
   - **On the ds as user ifps:**
   - **. /awips/adapt/ifps/localbin/ifps-ccc.env (where ccc = WFO id)**
   - **export TERM=vt100**
   - **dbaccess ifps_ccc (where ccc=wfo id)**
   - **[Q]uery Language**
   - **[N]ew**
   - **SET TRIGGERS FOR geography_directry DISABLED;**

- **< esc >**
- **[R]un**
- **[E]xit (twice)**

9. Run the CWA Change script
   - On the lx as ifps, launch the config_ifps application
     - **where # is the number of the workstation where you are working.)**
       - **Open a telnet session and login as root.**
         setenv DISPLAY lx#:0.0 OR
         setenv DISPLAY lx#:0.1
       - **unless in the bourne shell then do:**
         export DISPLAY=lx#:0.0 OR
         export DISPLAY=lx#:0.1
       - **Set X permissions:**
         xhost +
       - **Substitute user ifps.**
         su - ifps
         <password>
       - **Type: stty erase <backspace>**
       - **Set the environmental variable DISPLAY:**
         export DISPLAY=lx#:0.0 OR
         export DISPLAY=lx#:0.1
       - **Type: cd /awips/adapt/ifps/bin/linux**
       - **Launch the IFPS configuration utility:**
         ./config_ifps ccc (where ccc is your site ID.)
   - **Select the "CWA Change" button**
   - **Select "G" for "Go to Main Menu"**
   - **Select "F" for "Update/Generate Fire Weather Site Specific Data"**
   - **<fire weather configuration scripts run>**
   - **Select "E" for "End This Program"**

10. Re-Enable Database Triggers
   - **On the ds, as user ifps:**
   - **. /awips/adapt/ifps/localbin/ifps-ccc.env (where ccc=wfo id)**
   - **export TERM=vt100**
   - **dbaccess ifps_ccc (where ccc = WFO id)**
   - **[Q]uery Language**
   - **[N]ew**
   - **SET TRIGGERS FOR geography_directry ENABLED;**
   - **< esc >**
   - **[R]un**
   - **[E]xit (twice)**

11. Restart the ifpServer
   - **rlogin lx1**
   - **cd /awips/adapt/ifps/bin/linux**
   - **./stop_LX_ifps_servers ccc (where ccc = WFO id)**
   - **./start_LX_ifps_servers ccc (where ccc = WFO id)**

12. Create default combo map for current forecast cycle.
   - . /awips/adapt/ifps/localbin/ifps-ccc.env (where ccc = WFO id)
   - ./make_default_combos -s ccc -t yyyymmddcc -a fwx_combo_map -d ifps_ccc -f $IFPS_DATA/combo_prefs.ccc/fwx_default_combos.ccc

   (Where yyyymmddcc=year, month, day, cycle (00 or 12) of the current cycle (e.g. 2002052812); and where ccc=wfo ID (lower

case). Note that the ccc is located in 4 places in this command.)

- **exit (returns to ds1)**

13. Fire Weather Zone Configuration is now complete.

2.12. Configure Zone Climatology

Several products produced by the IFPS program require a comparison of the current conditions with the maximum/minimum temperature climatology of a zone-sized region. Initially, the maximum/minimum temperature climatology of a zone is estimated by applying a cubic spline to monthly normals from Synoptic observing sites within or near your CWA. Results from this interpolation may not be representative for every zone since the scheme relies on distance of the zone from an observing site and not on station biases. For example, a site may be in the center of a large metropolitan area and have its influence extend for several miles into rural or mountainous areas. The Climatology GUI allows you to change this initial guess of the zone climatology by applying local cooperative (Coop) station climatology to each zone.

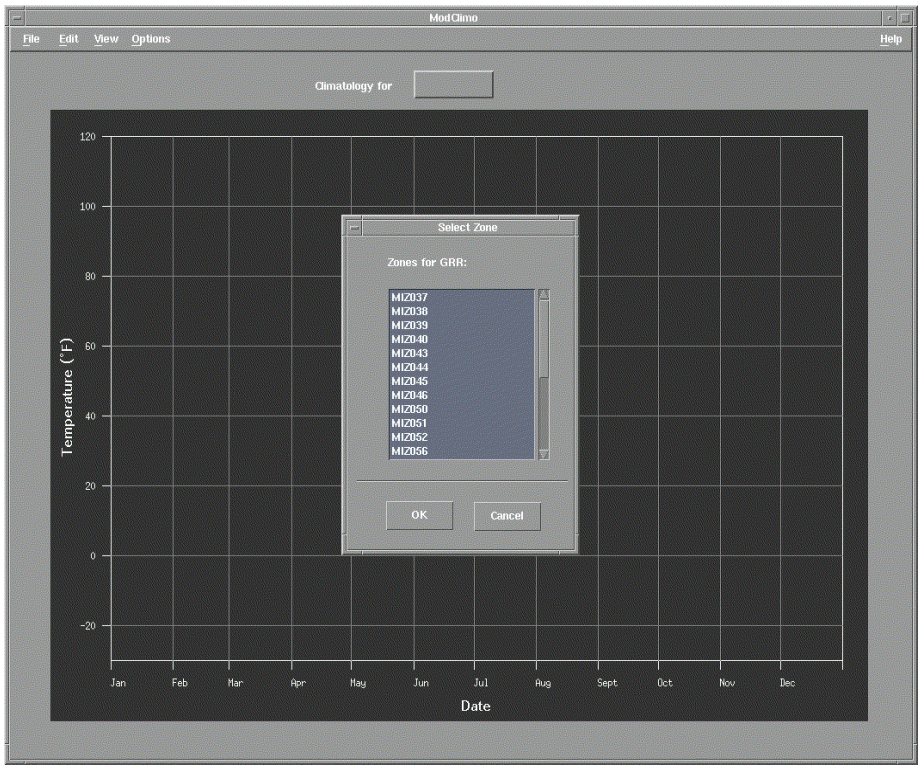

Figure 12 - ModClimo window

Climatology GUI Functionality

The Climatology GUI is accessed by selecting Product Generation, Internal Content, Zone Climatology from the main IFPS Configuration GUI. The initial ModClimo window that opens is shown in the following figure.

The interface consists of two main components; a main menu bar and a display graph where the data are plotted.

The main menu bar contains the following menus:

File:	**Edit**:	**View**:	**Options**:
Select zone	Choose mode	Grid	Smooth scaling
Load references	Add/Select	Zone	Fit temperature scale
Zone	Delete	Knots	Show full year
Coop stations...	Undo	Interpolation	
Unload references	Delete all	Reference	
Selected		Knots	
All		Interpolation	
Save		Legend	
Exit			

Note: The default settings for the display mode is Add/Select (located under Edit) and that all of the options are turned on under View.

In addition, when the first zone is selected for viewing and editing, a legend window, shown in the following figure, will open on the display graph.

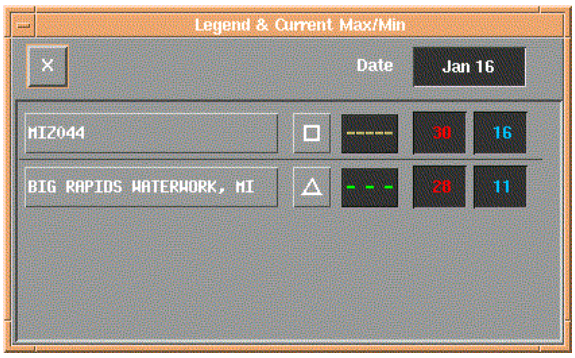

Figure 13 - Legend & Current Max/Min window

The Legend window contains a row of buttons and display fields for the base zone and each reference zone or Coop station loaded. The first row is always associated with the base zone data; the remaining rows contain the reference data sets.

Each row contains the following elements:

zone geo-id or COOP station pushbutton
display symbol pushbutton
interpolation line in the display window
maximum temperature at cursor date position in display window
minimum temperature at cursor date position in display window

Features of the legend window include:

1. Clicking MB1 on the geo-id pushbutton toggles the plot of the corresponding data. For reference data only, pressing MB3 pops up a menu with two items: "Copy to zone" and "Unload". The first will copy the reference data to the base zone; the latter unloads the reference data associated with that station.

2. Pressing MB3 on the symbol pushbuttons pops up a menu for choosing different characteristics for plotting the knots for the data:

Symbol type - box, triangle, reverse triangle, +, *, x, 0.
Symbol size - Small, Medium, Large
Symbol line thickness - Thin, Thick

3. Pressing MB3 on the interpolation line pushbutton produces a popup menu for changing the color and width of the interpolation line for the data.

The legend window appears when the first zone is selected for editing. It can be removed by clicking the "X" pushbutton at the top left corner of the window. Press the "Legend" toggle under the View menu to pop it up again.

When the Zone Climatology application initially opens, the display graph is blank and overlaid with a smaller window titled Select Zone. This is where the initial zone is selected for viewing and editing.

Select a zone and click OK. The climatology data for that zone will be displayed as shown in the following figure.

The legend window will also pop up over the display graph. In the above example, the legend has been moved to the lower center of the display graph, so you can better see all of the features in the Climatology GUI.

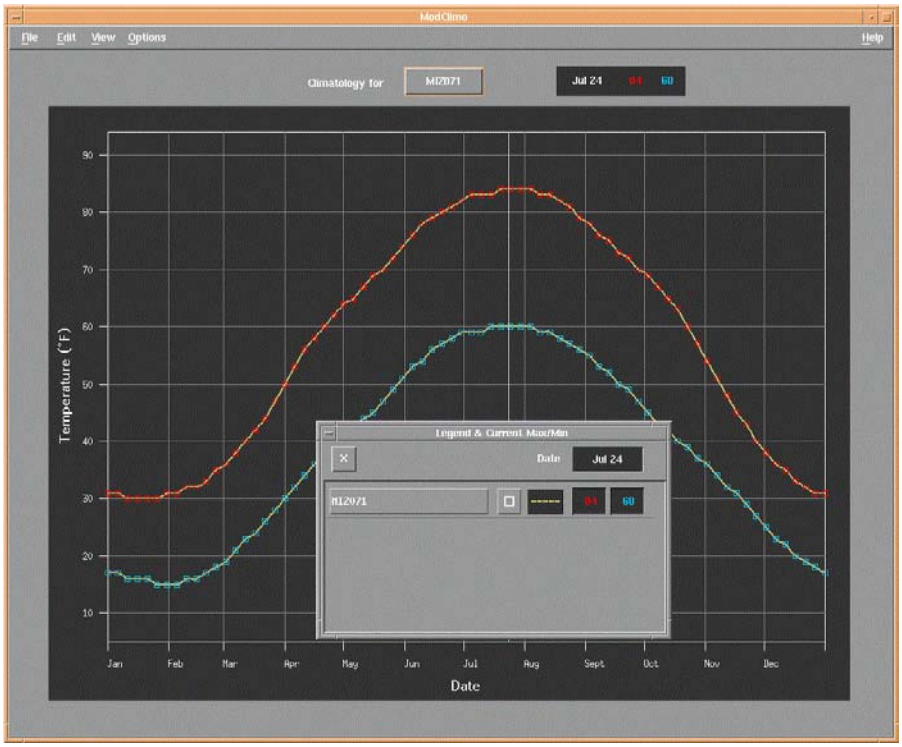

Figure 14 - ModClimo max/min Graph for Michigan Z071 with Legend window

There is a symbol on each normal maximum and minimum graph (square by default) called a knot. There is one for every 5 Julian days starting with 1 and ending with 366 (e.g., 1, 6, 11, 16, ...361, 366). You can change the knot symbol by pressing MB3 on the symbol pushbuttons to display a pop-up menu to select different characteristics. The data for dates between the 5 Julian day knots are interpolated with a solid line between points.

Climatology GUI Configuration:

The Climatology Interface initially opens with default settings that you can change. You need to make changes in the Modclimo file located in the /awips/adapt/ifps/Xdefaults directory. You can use your favorite editor or follow these steps:

1. In the Configure IFPS main GUI, select Editors.

2. Select Xdefaults file.

3. Select any of the options listed such as ICS. This will open the gnotepad editor containing the Ics_ccc file.

4. Select File and Open. File selection window will open in the /awips/adapt/ifps/bin/linux directory.

5. Click ../ a couple of time to obtain the /awips/adapt/ifps directory.

6. Select the Xdefaults directory and scroll down the file list to the ModClimo file and select it.

Some of the options that you may want to change are:

- Default state of toggle buttons under the View menu - these are all set to true.
- Absolute maximum and minimum value for temperature - default values are -30 and 120F.
- Radius of the circle that defines the area of Coop stations - default is 50, suggest you change this to 30.
- Default state postal code on the Local Coop Dialog - default is set to WV, change to your own state.

7. When finished editing the file, select File and Save.

8. Select File and Exit to return to the Xdefault Files GUI.

Viewing and Modifying the Zone Climatology:

To view and modify the climatology for a zone, you need to follow these steps:

1. Load the zone that you want to view and/or modify.

If the Select Zone window is not already open, under File in the main menu, select the Select zone... option. When the Select Zone window opens, select the zone. You can also click on the box labeled "Climatology for" to display the Select Zone window.

Note: You can only change one zone at a time. This is the first zone listed in the legends window. All of the other zones or stations listed in the legends are reference data.

2. Load the zone or Coop station that you want to use as a reference (comparison to the base or first zone loaded).

Under File in the main menu, select Load references and either Zone or Coop stations.... If you select Zone, the Select Zone

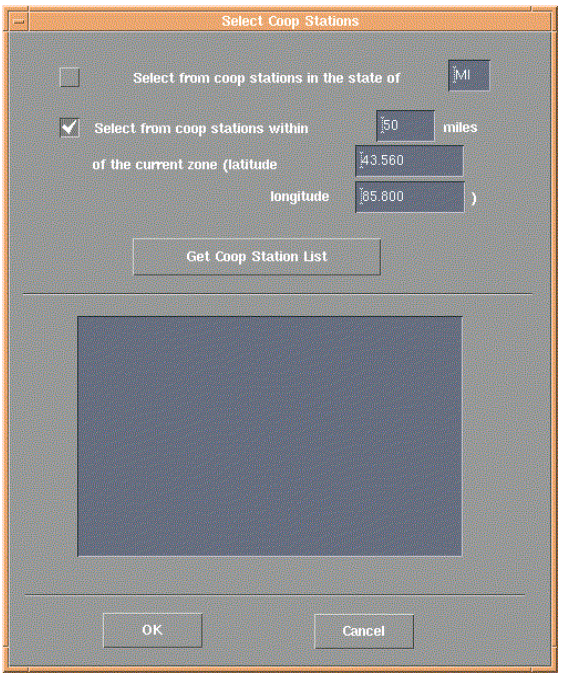

Figure 15 - Select Coop Stations window

window will pop up again. At first, you would like to compare the default zone climatology with the climatology from a Coop station in or near the zone.

You already have loaded a zone, so, now you need a Coop station loaded as a reference. Under File in the main menu, select Load references and Coop stations...

This will display (right) a Select Coop Stations window shown in the following figure:

Opening Select Coop Stations window:

In this window there are two options for selecting Coop stations:

Step 1. Located in a particular state.

Step 2. Within a certain distance from the Coop station to the center of the zone being edited.

These two criteria can be used either individually or together. Set the criteria by choosing the appropriate toggle buttons and entering the state postal code and/or the maximum distance. By default, the option to select Coop stations within xx miles of the current zone is toggled on.

Note: These options can be changed in the ModClimo application Xdefaults file. See section 3 below. It is suggested that you try an obtain a station within 25 or 30 miles from the zone center point.

Click on the "Get Coop Station List" button to display a list of possible Coop stations meeting the criteria that you specified. A sample list is shown in the following figure:

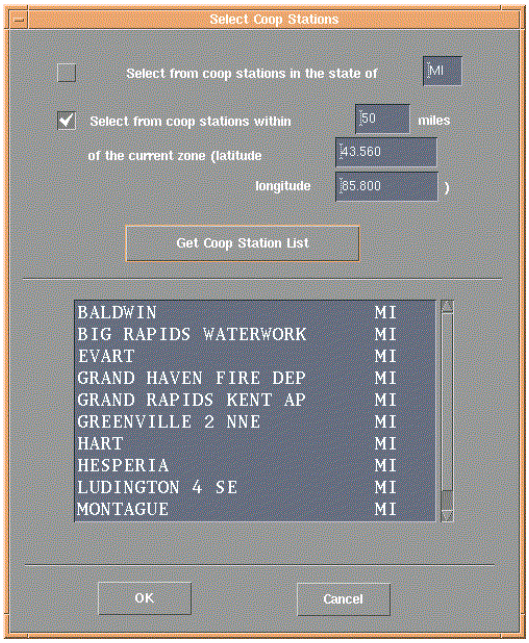

Figure 16 - Select Coop Stations Window

It is suggested that you have a map showing the location of the counties and small cities across your CWA. You can use the map to help you determine a Coop station that is representative of the zone.

Note: You can go back and select another Coop station as a reference and adjust the zone climatology to an average between more than one station.

Select a Coop station from the displayed list (note possible scroll bar for additional stations) and click OK.

Data for the selected Coop station will be plotted on the display graph with the zone as shown in the following figure:

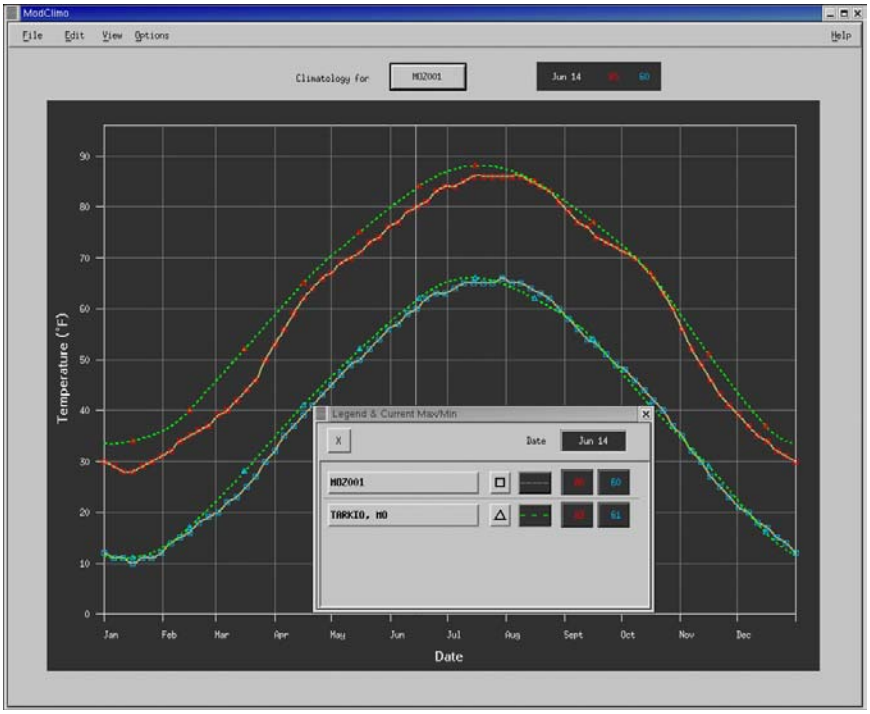

Figure 17 - ModClimo max/min Graph for zone MOZ001 and Coop station Tarkio, Mo

The legends box lists the base zone first (MOZ001) and then all reference zones and stations (Tarkio, MO).

The cursor position is indicated by a vertical line on the display graph. By default, the display edit mode is Add/Select, so, the (interpolated) max/min temperatures are for the date at the cursor position. The date and max/min values are displayed in two locations; in a black box above the display graph and in the Legend window.

When in the Add/Select mode, you can modify the existing knots or insert additional knots.

Step3. At this point, you have several options; keep the default zone climatology, modify some of the data points or make all of the data points for your default zone the same as the reference stations'.

If you want to change only a few points on the curve, you should go to Step3a. If you want to copy all reference points to your zone, you need to go to Step3b. You will probably find it easier to copy all reference points to a zone.

Step3a. Modify a plot point (knots).

Use this step if you only want to adjust a few points that seem out of line.

Click MB1 in the neighborhood of a zone plot point (knots) to select the knot for modification (you should see a cursor with both up-down and left-right arrows and a fixed vertical line through the knots in a different color). Note: You can only change the plot point of the base zone (the first one listed in the legend). In this example, the curve is the fine yellow dash line with the red squares. These are the default values. You will not be allowed to change the reference curves.

To change the maximum or minimum temperature, press MB2 close to the corresponding knot (the cursor changes into up-down arrows) and move the cursor up or down. The temperature at the current cursor position is always displayed to the right of the cursor. Release MB2 when the desired value is reached. The plot will update to reflect the new temperature value for the knot moved. (To void the dragging of the knot, move the cursor far away from the vertical line so that the temperature display disappears and release MB2.)

To change the date for the knots, press MB2 close to the vertical line but away from the knots (the cursor should change into left-right arrows) and move the cursor. Release MB2 when the date displayed above the cursor shows the desired value.

Note: It is impossible to move the knots beyond their neighboring data points. The date display vanishes when the cursor position crosses a neighboring data point.

When you are satisfied with the changes, click MB1 again to deselect the knots and the program returns to the normal roaming state.

Other options to modify a data curve are:

A. Add another plot point (knot):

If you click MB1 away from any knots, a new pair of max/min knots will be inserted into the data at the pointer position. The new knots are automatically selected for modification.

B. Delete plot points (knots):

Switch to the delete mode by selecting "Choose mode" from the Edit menu and then select "Delete", or choose "Delete" on the popup menu activated by pressing
MB3 in the graphical display area. Move the cursor close to the point you want to delete and click MB1.

Caution: Don't forget to change back to the Add/Select mode after you are done deleting unwanted knots.

C. Undo an edit (most recent change):

Select "Undo" from the Edit menu or press MB3 while in the drawing area to post the popup menu and select "Undo".

D. Change the date and temperature scales:

You can change the date (horizontal) and temperature (vertical) scale by pressing MB1 or MB2 while the cursor is in the respective scale area (below date scale or to the left of temperature scale) and drag on the scale. The scale updates according to if the lower or upper bound is changed, which depends on the proximity of the pointer when the button is pressed.

The following two figures show the result of changes in the temperature and date.

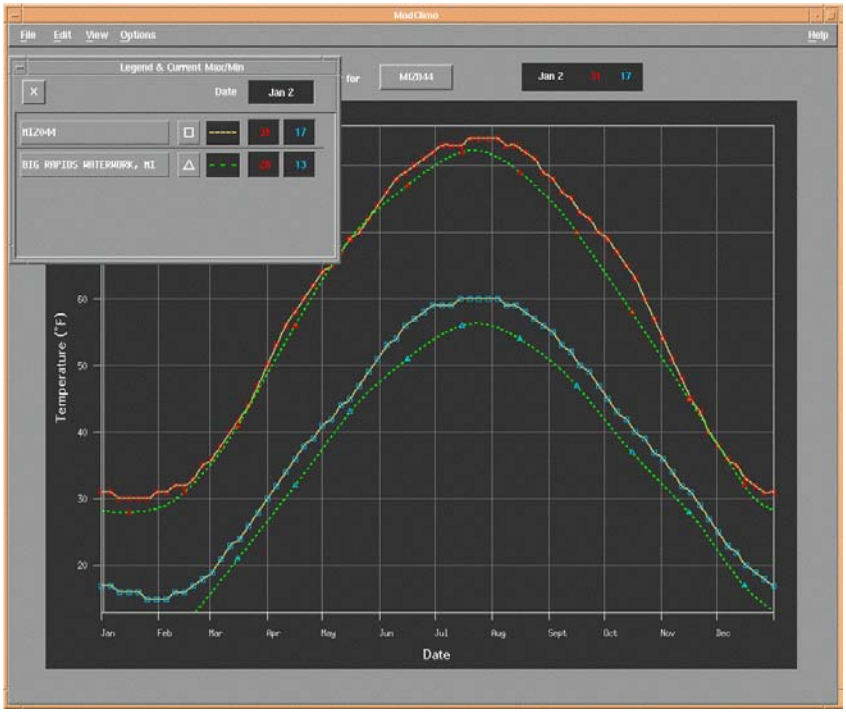

Figure 18 - ModClimo after changes in the temperature (vertical scale)

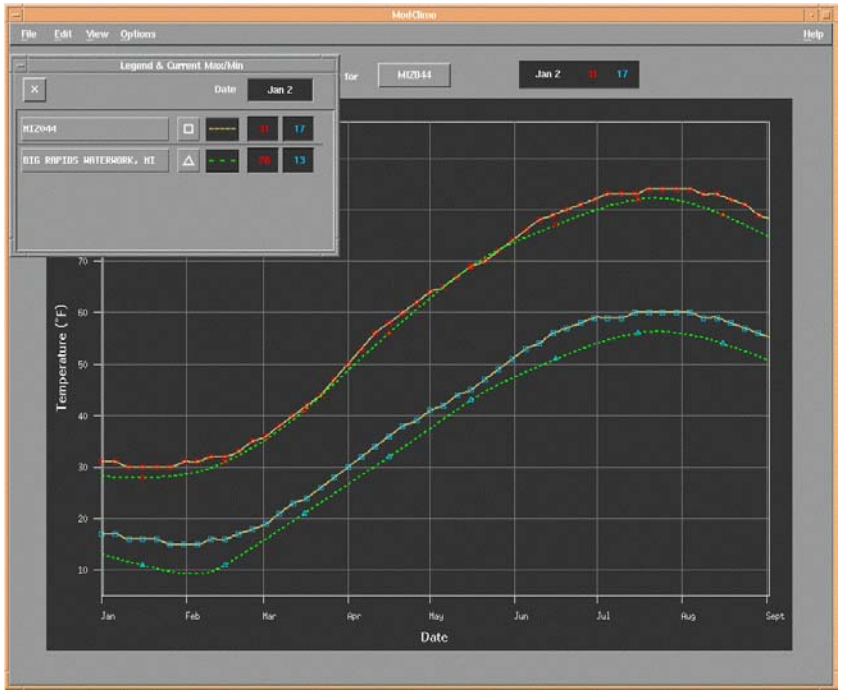

Figure 19 - ModClimo after changes in the date (horizontal scale)

Note: If the "Smooth scaling" toggle on the Options menu is set, the entire plot updates while the scales are being dragged; otherwise, only the scale is redrawn continually and the plot is refreshed only when the mouse button is released.

Step3b. Copy the entire reference Max/Min curves to the zone.

If you want to copy all reference points to your zone, you need to MB3 over the reference station bar in the legends window and select Copy to zone. The reference station max/min curves become the base zone curves as shown in the following figure:

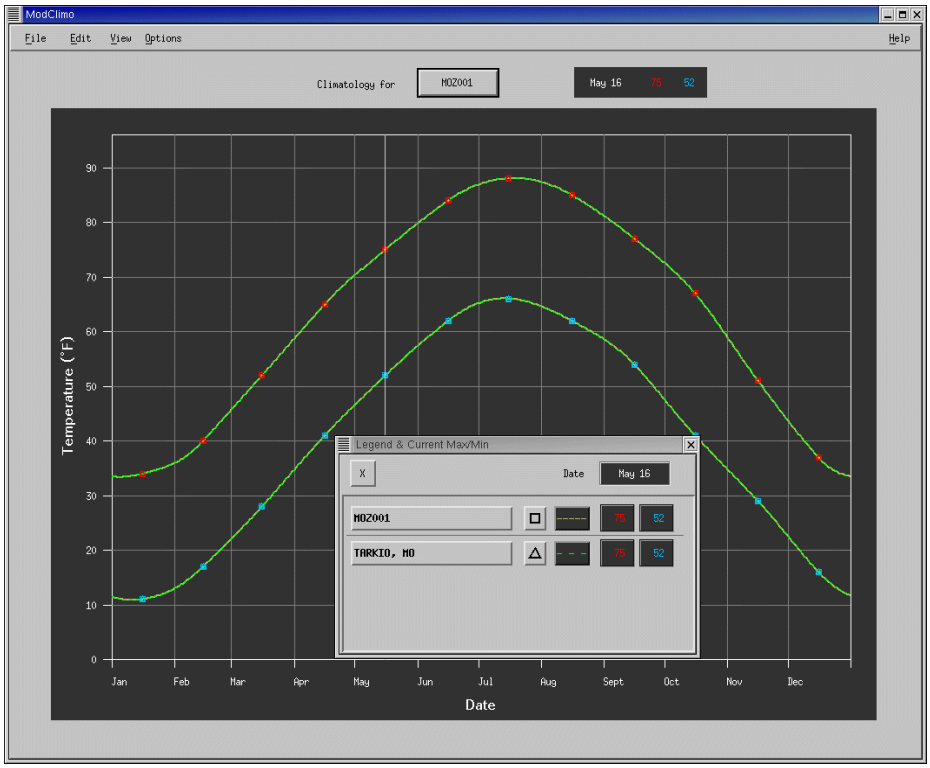

Figure 20 - ModClimo max/min Graph showing Coop station data copied to zone MOZ001

The curves are identical and displayed with the base zone map symbols. If you deselect one of the station bars in the legend, you can verify that the curves are identical.

Step3c. Copy a zone into another zone.

If you have several small counties or have one or more counties with similar climatology, you may want to copy one zone climatology that you have adjusted into another zone. Follow these steps:

1. Select the county that you want to adjust. Go to File, Select zone... and selecting the zone in the Select Zone window. You have now selected the base zone in the legend window.

Note: remember that another way to access the Select Zone window is to click on the "Climatology for" box.

2. Select the reference zone. Go to File, Load references, Zone... and select the zone in the Select Zone window. The reference zone will be displayed in the display graph and in the legends window. See the following figure.

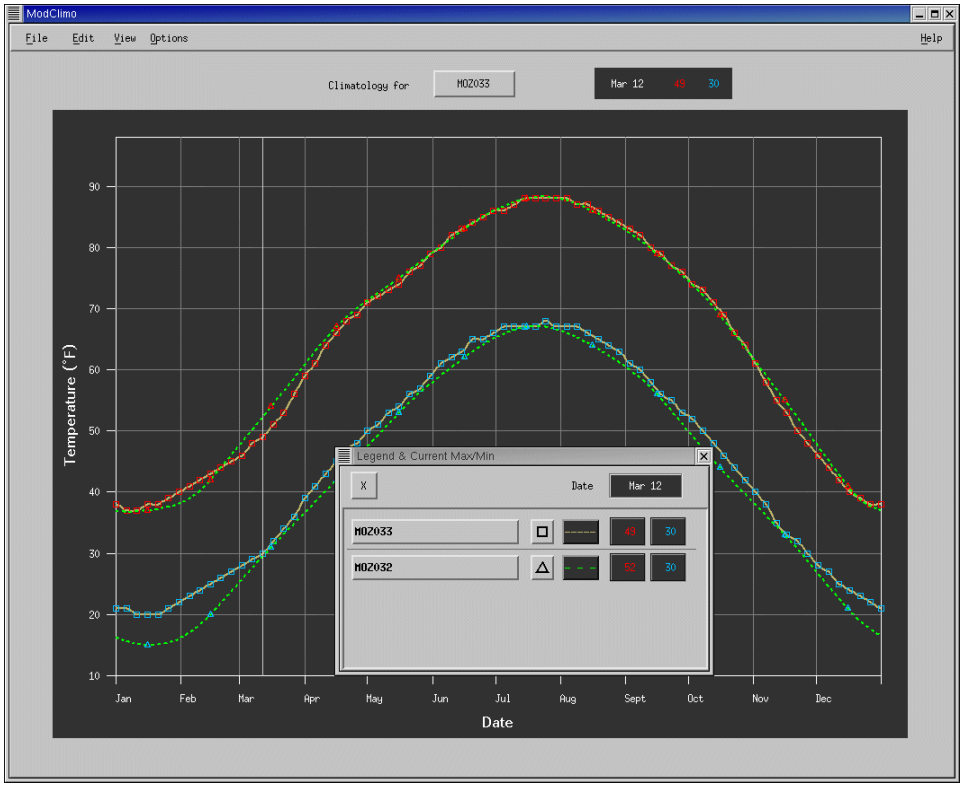

Figure 21 - ModClimo max/min Graph showing a base zone and a reference zone

Notice in the above figure that the base zone (the one that we are adjusting) is listed first in the legends window and contains a data point every 5 days (marked by blue boxes).

3. Copy the reference zone into the base zone. MB3 over the reference zone bar in the legends window and select Copy to zone. Now, both zone curves are identical.

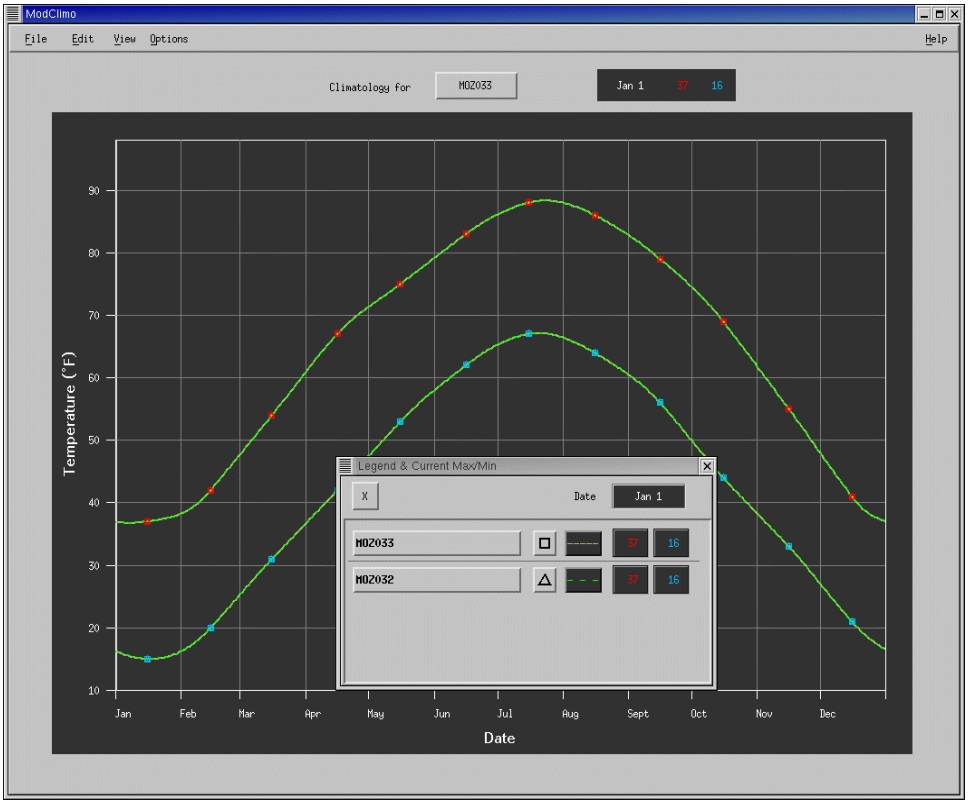

Figure 22 - ModClimo max/min Graph showing identical base and reference zones

Toggle off either one of the zone bars in the legend window and you will see that the curves are identical.

4. Select File and Save. You have now made the zone climatology the same for two zones.

Step4. Save your changes.

When you are finished editing a zone's data, select "Save" from the File menu to save the edited data to the database. The data are stored in the climatology table
in the IFPS database.

<u>To unload reference data</u>:

There are several ways to unload reference data:

1. You can unload all references by selecting "Unload references" from the File menu and then "All".

2. If you want to unload a partial list of loaded references, click on "Selected..." instead of "All". A dialog showing all loaded references will appear. Select the zones to unload and click OK.

3. Clicking MB1 on the geo-id pushbutton in the Legend window toggles the plot of the corresponding data. For reference data only, pressing MB3 to pop up a menu and select "Unload".

2.13. How to Add Local Hazards to the Composer Hazard Menu

In the past sites have been allowed to add local products to their WWA database to serve various local needs. Although such products added prior to the install of OB3 will remain in the database adding new local hazards will now be done by request through an NCF trouble ticket. Nationally supported hazards are those listed in section 1.10. with full support of intersite coordination. Local hazards are those that serve the local office and don't depend on any type of intersite coordination.

3. USING THE WATCH, WARNING, ADVISORY APPLICATION

The WWA client is only supported for Linux however it is still possible to run WWA from the HP workstation by selecting the provided menu option described below. Although the client interface will run on the Linux box the display will automatically port to the HP system where activated.

Launch WWA on lx1 or lx2:

1. On either lx1 or lx2 select the WWA option from the linux menu bar

Launch WWA on HP workstations:

1. From the HP workstation desktop menu select the option to launch WWA from lx1 or lx2.
   - Keep in mind that the number of WWA applications running at the same time is limited to 3 per Linux system.

3.1. Creating Watch, Warning, Advisory Products

3.1.1. Generating a single segmented WWA product

Pre-Conditions:	• No highlighted product in WWA Monitor
Event Course:	**Generating a single segmented WWA product.**

1) Select *New...* from the WWA Monitor to launch the Composer interface.

2) Select a *Hazard* type from the WWA Composer pull down menu.

3) Select geographical area of hazard on WWA Geo-Viewer.

4) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer.

5) Select the *Overview/Synopsis* and/or *Descriptive* text buttons to enter free text (product dependent).

6) Select any *Optional Bullets* from the Composer.

7) Select *Transmit* to open WWA transmit window display.

8) Evaluate the final product, then select *Yes* to disseminate.

- **Select *No* and return to product preparation process.**

Post-Conditions:	New issued (white) product in WWA Monitor, public dissemination of product.

3.1.2. Generating a multi-segmented WWA product

Pre-Conditions:	• No highlighted product in WWA Monitor
Event Course:	**Generating a multi-segmented WWA product**

1) Select *New...* from the WWA Monitor to launch the Composer interface.

2) Select a *Hazard* type from the WWA Composer pull down menu.

3) Select geographical area of hazard on WWA Geo-Viewer.

4) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer.

5) Select the *Overview/Synopsis* and/or *Descriptive* text buttons to enter free text (product dependent).

6) Select any *Optional Bullets* from the Composer.

7) Select *Save Only...* to store segment in WWA Monitor.

8) Repeat steps 2-7 for each new hazard segment.

9) Close the WWA Composer by selecting the *Close* button located on the bottom right of interface.

10) In the WWA Monitor highlight each generated segment for collection into final WWA product.

11) Select *Transmit* from the WWA Monitor to display transmit interface.

12) Evaluate the final product, then select *Yes* to disseminate.

- **Select *No* and return to product preparation process.**

Post-Conditions:	New issued (white) product in WWA Monitor, public dissemination of product.

3.1.3. Time extension of an issued single segmented product

Pre-Conditions:	• Issued (white) product for follow-up in WWA Monitor • No product/segment highlighted in WWA Monitor
Event Course:	**Time extension of an issued single segmented product**

1) Highlight issued product in the WWA Monitor.

2) Select *Followup...* from the WWA Monitor to launch the Composer interface.

3) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer.

4) Select the *Overview/Synopsis* and/or *Descriptive* text buttons to enter free text (product dependent).

5) Select any *Optional Bullets* from the Composer.

6) Select *Transmit* from the Composer to display transmit interface.

7) Evaluate the final product, then select *Yes* to disseminate.

- **Select *No* and return to product preparation process.**

Post-Conditions:	New issued (white) product in WWA Monitor, public dissemination of product.

3.1.4. Areal expansion of an issued WWA product

Pre-Conditions:	• Issued (white) product for follow-up in WWA Monitor • No product/segment highlighted in WWA Monitor
Event Course:	**Areal expansion of an issued WWA product**

1) Highlight issued product in the WWA Monitor.

2) Select *Followup...* from the WWA Monitor to launch the Composer interface.

3) Select new zone or county in WWA Geo-Viewer

3) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer.

4) Select the *Overview/Synopsis* and/or *Descriptive* text buttons to enter free text (product dependent).

5) Select any *Optional Bullets* from the Composer.

6) Select *Transmit* from the Composer to display transmit interface.

7) Evaluate the final product, then select *Yes* to disseminate.

- **Select *No* and return to product preparation process.**

Post-Conditions:	New issued (white) product in WWA Monitor, public dissemination of product.

3.1.5. Cancel an issued WWA product

Pre-Conditions:	• Issued (white) product in WWA Monitor • No product/segment highlighted in WWA Monitor
Event Course:	**Cancel an issued WWA product**

1) Highlight issued product in the WWA Monitor.

2) Select *Cancel...* from the WWA Monitor to launch the Composer interface.

3) Adjust *Expires*, and *ProdExp* time fields in the WWA Composer if 1 hour default not desired

4) Select *Transmit* from the Composer to display transmit interface.

5) Evaluate the final product, then select *Yes* to disseminate.

- **Select *No* and return to product preparation process.**

Post-Conditions:	New issued (white) product in WWA Monitor, public dissemination of product.

3.1.6. Clearing a zone/county from an issued WWA product

Pre-Conditions:	• Issued (white) product in WWA Monitor • No product/segment highlighted in WWA Monitor
Event Course:	**Clear a zone/county from an issued WWA product**

1) Highlight issued product in the WWA Monitor.

2) Select *Clear...* from the WWA Monitor to launch the Composer interface.

3) Select zone or county on WWA Geo-Viewer to clear from product.

4) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer.

5) Select the *Overview/Synopsis* and/or *Descriptive* text buttons to enter free text for cleared counties (product dependent).

6) Select any *Optional Bullets* from the Composer.

7) Select *Transmit* from the Composer to display transmit interface.

8) Edit & evaluate the final product, then select *Yes* to disseminate.

- **Select *No* and return to product preparation process.**
- **Never edit any field other than the headline, overview/synopsis, or descriptive text fields.**

Post-Conditions:	New issued (white) product in WWA Monitor, public dissemination of product.

3.1.7. Upgrade a WSW/NPW watch: upgrade function active

Pre-Conditions:	• Issued (white) product in WWA Monitor • Upgrade function active • No product/segment highlighted in WWA Monitor
Event Course:	**Upgrade WSW/NPW from a watch: upgrade function active**

1) Select *New...* from the WWA Monitor to launch the Composer interface.

2) Select the correct hazard upgrade for issued watch from the Composer hazard menu.

3) Select the geographical area of hazard that overlaps current watch on the WWA Geo-Viewer.

4) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer.

5) Select the *Overview/Synopsis* and/or *Descriptive* text buttons to enter free text (product dependent).

6) Select any *Optional Bullets* from the Composer.

7) Select *Transmit* from the WWA Monitor to display transmit interface.

8) Select *Yes* when prompted to acknowledge if this is an upgrade to the existing watch.

9) Edit & evaluate the final product, then select *Yes* to disseminate.

- **Select *No* and return to product preparation process.**
- **Never edit any field other than the headline, overview/synopsis, or descriptive text fields.**

Post-Conditions:	New issued (white) product in WWA Monitor, public dissemination of product.

3.1.8. Upgrade a WSW/NPW watch: upgrade function inactive

Pre-Conditions:	• Issued (white) product in WWA Monitor • Upgrade function inactive • No product/segment highlighted in WWA Monitor
Event Course:	**Upgrade WSW/NPW from a watch: upgrade function inactive**

1) In the WWA Monitor highlight the issued (white) watch.

2) Select *Clear...* from the WWA Monitor to launch the Composer interface.

3) Deselect zones or counties in the GeoViewer being upgraded, to cancel them from watch.

4) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer as needed.

5) Select the *Overview/Synopsis* and/or *Descriptive* text buttons to enter free text (product dependent).

6) Select the *Save Only...* button on the WWA Composer.

7) Select the *New...* button from the WWA Monitor to generate an upgrade segment.

8) Select the upgraded *Hazard* type from the WWA Composer pull down menu.

9) Select geographical area of hazard on WWA Geo-Viewer.

10) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer.

11) Select the *Overview/Synopsis* and/or *Descriptive* text buttons to enter free text (product dependent).

12) Select any *Optional Bullets* from the Composer.

13) Select the *Save Only...* button on the WWA Composer.

14) Repeat steps 8 through 13 for each hazard upgrade.

15) Close the WWA Composer by selecting the *Close* button located on the bottom right of interface.

16) Select all generated segments (tan) from the WWA Monitor, including the first cleared one.

17) Select *Transmit* from the WWA Monitor to display transmit interface.

18) Edit & evaluate the final product, then select *Yes* to disseminate.

- **Select *No* and return to product preparation process.**
- **Never edit any field other than the headline, overview/synopsis, or descriptive text fields.**

Post-Conditions:	New issued (white) product in WWA Monitor, public dissemination of product.

3.2. Watch By County / Watch County Notification product generation

3.2.1. Create a WCN with *No* other active watch

Pre-Conditions:	• SPC Issued WOU • No other active watch • Format active
Event Course:	**Create a WCN with *No* other active watch**

1) In the provided, edit enabled, text editor on the Text Workstation complete the AWIPS Header Block information (ie CCCWCNXXX, DEF) and select the *enter* button.

- **If not automatically displayed on the Text Workstation defined in enter *WRKWG#* (where # is the defined workstation) into the entry box to the right of *AFOS_Cmd* on the XT text editor, select *Enter* on the keyboard, then *Enter Editor* button to edit.**

2) Select the *Send* button on the Text Workstation

- **Note: Do not edit the UGC line. If an extra county is in the WCN product or a county is missing or the purge time is incorrect, you must start over! If WWA is configured correctly there should be no reason to edit the generated WCN.**

Post-Conditions:	Generated WCN product issued (white) in WWA Monitor. Public dissemination of WCN product.
	Page 1 of 1

3.2.2. Extend a WCN in time

Pre-Conditions:	• One or more active WCN watch
Event Course:	**Extend a WCN in time**

1) Highlight the active/issued WCN (white) product in the WWA Monitor.

2) Select *Followup...* from the WWA Monitor to launch the Composer interface.

3) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer.

4) Select *Save Only* on the Composer, then select *Close*.

5) Repeat steps 1 through 4 for all active/issued (white) watches.

6) Highlight each follow-up WCN (tan) segment, then select *Transmit...* in the WWA Monitor.
- **Select all follow-up WCN segments (tan) in the event of multiple watches.**

7) Evaluate the final product, then select *Yes* to disseminate.
- **Select *No* and return to product preparation process.**

Post-Conditions:	Issued (white) WCN product in WWA Monitor, public dissemination of product.

3.2.3. Clear geographical area from watch, *No* other active watch

Pre-Conditions:	• No other active watch
Event Course:	**Clear geographical area from watch, *No* other active watch**

1) Select the issued (white) WCN watch in the WWA - Monitor.

2) Select the *Clear* button.

- **The "WWA Composer - Clear" window will open.**

3) In the GeoViewer, select counties you wish to clear from the watch.

- **The counties that you are clearing will be highlighted in yellow while the counties that remain in the watch will continue to be highlighted in blue.**

4) Select *Transmit* from the WWA Composer to display transmit interface.

5) Evaluate the final product, then select *Yes* to disseminate.

- **Select *No* and return to product preparation process.**

Post-Conditions:	Generated WCN product issued (white) in WWA Monitor. Public dissemination of WCN product.
	Page 1 of 1

3.2.4. Cancel an existing watch, *No* other active watch

Pre-Conditions:	• No other active watch • Format active
Event Course:	**Cancel an existing watch, *No* other active watch**

1) Highlight the issued (white) watch in the WWA Monitor.

2) Select the *Cancel* button.

- **The "WWA Composer - Cancel" window will open.**

3) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer as needed.

4) Select *Transmit* from the WWA Monitor to display transmit interface.

5) Evaluate the final product, then select *Yes* to disseminate.

- **Select *No* and return to product preparation process.**

Post-Conditions:	Generated WCN product issued (white) in WWA Monitor. Public dissemination of WCN product.

3.2.5. Create WCN no county overlap, one or more active watch

Pre-Conditions:	• One or more active watch • Green unissued WCN in WWA-Monitor
Event Course:	**Create WCN no county overlap, one or more active watch**

1) Close the formatted/generated WCN product automatically displayed on the text workstation, created from SPC's new WOU.

- **This will be in edit mode in the XT editor. If not open then skip this step.**

2) Highlight the active & issued WCN (white) product in the WWA Monitor and then select the *Follow-up* button.

3) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer as needed.

4) Select the *Save Only* button on the WWA Composer.

5) Close the WWA composer by selecting the *Close* button.

6) Repeat steps 2 through 4 for all active watches in CWA.

7) Highlight the tan (follow-up WCN) and highlight the recently generated "green" (New SPC watch) product in the WWA Monitor and then select the *Transmit* button.

- **Select all follow-up WCN segments (tan) in the case of more than one active watch to collect each segment.**

8) Evaluate the final product, then select *Yes* to disseminate.

- **Select *No* and return to product preparation process.**

Post-Conditions:	Generated WCN product issued (white) in WWA Monitor. Public dissemination of WCN product.
	Page 1 of 1

3.2.6. Create a new watch, with one or more active watch, and *with* county overlap

Pre-Conditions:	• SPC issued WOU • One or more active watch • Format active
Event Course:	**Create a new watch, with one or more active watch and with county overlap**

1) Close the formatted/generated WCN product automatically displayed on the text workstation, created from SPC's new WOU.

- **This will be in edit mode in the XT editor. If not open then skip this step.**

2) Highlight the active & issued WCN (white) product in the WWA Monitor and then select the *Clear* button.

- **WWA Composer will open. Adjust any times if necessary.**

3) Deselect the overlapping counties from the WWA-GeoViewer.

4) Select the *Save Only* button on the WWA Composer.

5) Close the WWA composer by selecting the *Close* button.

- **Product should change color from white to tan.**

6) Repeat steps 2 through 4 for all active watches in CWA.

7) Highlight the tan (cleared WCN) and highlight the recently generated "green" (New SPC watch) product in the WWA Monitor and then select the *Transmit* button.

- **Select all cleared WCN segments (tan) in the case of more than one active watch to collect each segment.**

8) Evaluate the final product, then select *Yes* to disseminate.

- **Select *No* and return to product preparation process.**

Post-Conditions:	Generated WCN product issued (white) in WWA Monitor. Public dissemination of WCN product.

3.2.7. Clear a portion of the watch, with one or more active watch, and with county overlap

Pre-Conditions:	• One or more active watch
Event Course:	**Clear a portion of the watch, with one or more active watch, and with county overlap**

1) Highlight the issued (white) watch in the WWA Monitor.

2) Select the *Clear* button.

3) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer as needed.

4) In the GeoViewer, select the counties you wish to clear from the watch.
- **Counties that you are clearing will be highlighted while the counties that remain in the watch will continue to be highlighted in blue.**

5) In the WWA Composer select the *Save Only* button and close the Composer .

6) Select the existing watch (white) in the WWA Monitor.
- **Any watch that has not been cleared via the five preceding steps.**

7) Click on the *Follow-up* button on the WWA Monitor.

8) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer as needed.

9) Select the *Save Only* button and close the Composer window.

10) Repeat steps 6 through 8 for each remaining & issued watch that you want part of the new product.

11) Highlight the unissued cleared watch and the other unissued followed up watches in the WWA Monitor.

12) Select the *Transmit* button on the WWA Monitor

13) Evaluate the final product, then select *Yes* to disseminate.
- **Select *No* and return to product preparation process.**

Post-Conditions:	Issued (white) WCN in WWA Monitor. Public dissemination of WCN product.

3.2.8. Cancel a watch with one or more active watch

Pre-Conditions:	• One or more active watch
Event Course:	**Cancel a watch with one or more active watch**

1) In the WWA Monitor, select the issued watch (white) to be canceled.

2) Select the *Cancel* button from the WWA Monitor

3) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer as needed.

4) In the WWA Composer select the *Save Only* button and close the Composer interface.

6) Select the existing watch (white) in the WWA Monitor
- **Any watch that has not been cancelled via the five preceding steps.**

7) Click on the *Follow-up* button in the WWA Monitor

8) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer as needed.

9) Select the *Save Only* button and close the Composer window.

10) Repeat steps 6 through 8 for each remaining & issued watch that you want part of the new product.

11) Highlight the unissued cancelled watch and the other unissued followed up watches in the WWA Monitor.

12) Select the *Transmit* button from the WWA Monitor.

13) Evaluate the final product, then select *Yes* to disseminate.
- **Select *No* and return to product preparation process.**

Post-Conditions:	Issued (white) WCN in WWA Monitor. Public dissemination of WCN product.

3.2.9. Cancel multiple watches with one or more active watch

Pre-Conditions:	• One or more active watch
Event Course:	**Cancel multiple watches**

1) In the WWA Monitor, select the issued watch (white) to be canceled.

2) Select the *Cancel* button from the WWA Monitor

3) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer as needed.

4) In the WWA Composer select the *Save Only* button and close the Composer interface.

6) Repeat steps 1 through 4 until all the watches you want to cancel have been saved to the WWA Monitor.

7) Select the existing watch in the WWA Monitor
- **Any watch that has not been cancelled via the six preceding steps.**

8) Select the *Follow-up* button in the WWA Monitor

9) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer as needed.

10) Select the *Save Only* button and close the Composer window.

11) Repeat steps 7 through 10 for each remaining issued watch that you want to be a part of the product.

12) Highlight the unissued cancelled watch and the other unissued followed up watches in the WWA Monitor.

13) Select the *Transmit* button from the WWA Monitor.

14) Evaluate the final product, then select *Yes* to disseminate.
- **Select *No* and return to product preparation process.**

Post-Conditions:	Issued (white) WCN in WWA Monitor. Public dissemination of WCN product.
	Page 1 of 1

3.3. Running WWA in Backup Mode

Launch WWA on lx1 or lx2 in back up mode:

1. Using the desktop drop down menu select the WWA option.

2. Select desired mode to launch WWA, local, primary, or secondary.

Launch WWA on HP workstations in back up mode:

1. Open a telnet session on an HP
   right mouse click, telnet menu selection

2. Login as user awipsusr:
   awipsusr
   <enter awipsusr password when prompted>

3. Set the DISPLAY enviornment variable
   setenv DISPLAY ws#:0.0 ← Where # is the workstation number, eg ws1

4. Remotely log into lx1 or lx2
   ssh -l awipsusr <loc> ← Where loc is IP address of lx1 or lx2 or alias such as lx1-pqr

5. Launch WWA program as desired, primary or secondary, backup site:
   wwa.bat -p ← as primary backup site
   or
   wwa.bat -s ← as secondary backup site

3.4. Running WWA WBC/WCN in Backup Mode

WWA WBC/WCN backup settings are controlled from the selection "WCN Mode (WWA)" found under "Start WWA" on the AWIPS drop down menu. There are five menu selections:

Show Current Mode: Display current WBC/WCN backup setting.

Local Only: Set local WBC/WCN product generation. WCN will generate for local site only.

Local and Primary: Set local and primary WBC/WCN product generation. WCN will generate for local and primary backup site if in watch.

Local and Secondary: Set local and secondary WBC/WCN product generation. WCN will generate for local and secondary backup site if in watch.

Local, Primary and Secondary: Set local, primary, and secondary WBC/WCN product generation. WCN will generate for local, primary, and secondary backup sites if in watch.

4. REFERENCES

4.1. Troubleshooting Tips

4.1.1. Transmitting Error Message *"A WWA product transmit currently pending. Please try again later"*

An error checking routine was built into this version of WWA associated with the transmit that prohibits multiple transmit windows from being activate at the same time from any WWA application regardless of the workstation. This function was added to protect WWA database integrity. If this message is displayed and no other WWA application is running with an active transmit window on any workstation and you're sure an error has occurred it is possible to override this transmission block by following these steps:

1. Close transmit window and keep WWA running, open an xterm window on lx1 or lx2.

2. Login as user awips (if session not already awipsusr):
   su -l awips
   <enter password when prompted>

3. Remove all files named *wwaSendProd_<date>.txt, PIL_<date>.txt,* and *vtec_<pil>* by typing:
   rm /data/adapt/ifps/products/TEXT/wwaSendProd_*.txt
   rm /data/adapt/ifps/products/TEXT/PIL_*.txt
   rm /data/adapt/ifps/products/TEXT/vtec_*.txt

4. Close xterm window:
   exit

5. *Select *transmit* button on WWA composer and continue with transmit process.

* If block is still active contact NCF for assistance.

4.2. MDL Contact Information

MDL Customer Service:

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4.3. Additional and Related Material

- Meteorological Development Laboratory (MDL) Documents:
  Decision Assistance Branch Web Page: http://www.nws.noaa.gov/mdl/dab/decisionassistbr.htm
  WWA Web page: http://www.nws.noaa.gov/mdl/wwa

- WWA OB3 & Related Documents:
  WWA Users Manual: http://www.nws.noaa.gov/mdl/wwa/docs/OB3/WWA-OB3-UserManual.pdf
  WWA Admin Users Manual: http://www.nws.noaa.gov/mdl/wwa/docs/OB3/WWA-OB3-AdminUserManual.pdf
  New in OB2 Doc: http://www.nws.noaa.gov/mdl/wwa/docs/OB3/WWA-OB3-NEW.pdf
  Release notes: http://www.nws.noaa.gov/mdl/wwa/docs/OB3/WWA-OB3-ReleaseNotes.pdf

- Office of Climate, Water, & Weather Services (OCWWS) Documents:
  VTEC: http://www.nws.noaa.gov/om/vtec/index.shtml
  WCN format requirements: http://www.nws.noaa.gov/mdl/wwa/docs/WBCFormatReqFinal.pdf
  Upgrade/Downgrade requirement: http://www.nws.noaa.gov/mdl/wwa/docs/WWAupgradedowngradever2.pdf
  Zone/County Name requirement: http://www.nws.noaa.gov/mdl/wwa/zone_county_names.pdf

- Linux Reference:
  Pico Editor: http://www.uic.edu/depts/accc/software/pine/pico.html

- AWIPS System References:
  Data Management: http://www.nws.noaa.gov/datamgmt/index.html
  a2a Cross Reference: http://www.nws.noaa.gov/datamgmt/a2a/a2a.html

Appendix A

This appendix serves as a reference to key locations parsed in the SPC WCL product, by the WWA WCL ingest routine. The fields highlighted in figure 14 are searched to gather information by this routine and if missing or outside the expected format will cause the process to malfunction. This has been coordinated through the development process between SPC and MDL.

NWUS64 KWNS 261705
WCLA

❶.TORNADO WATCH A
COORDINATION COUNTY LIST FROM THE NWS STORM PREDICTION CENTER EFFECTIVE UNTIL ❷0100 UTC.

❸ARC013-019-025-027-029-033-039-045-047-051-053-057-059-061-073-081-083-085-091-097-099-103-105-109-113-115-119-125-127-131-133-139-149-270100-

AR
. ARKANSAS COUNTIES INCLUDED ARE

BRADLEY	CALHOUN	CLARK
CLEVELAND	COLUMBIA	CONWAY
DALLAS	FAULKNER	GARLAND
GRANT	HEMPSTEAD	HOT SPRING
HOWARD	JEFFERSON	LAFAYETTE
LITTLE RIVER	LOGAN	LONOKE
MILLER	MONTGOMERY	NEVADA
OUACHITA	PERRY	PIKE
POLK	PULASKI	SALINE
SCOTT	SEBASTIAN	SEVIER
UNION	WHITE	YELL

$$

❸LAC013-015-017-027-031-081-119-270100-

LA
. LOUISIANA PARISHES INCLUDED ARE

BIENVILLE	BOSSIER	CADDO
CLAIBORNE	LINCOLN	UNION
WEBSTER		

$$

❸TXC037-063-067-183-203-315-365-459-270100-

TX
. TEXAS COUNTIES INCLUDED ARE

BOWIE	CAMP	CASS
HARRISON	MARION	MORRIS
UPSHUR		

$$

❹ATTN...WFO...SHV...FTW...LZK...

❶ **TORNADO WATCH A or SEVERE THUNDERSTORM WATCH A**- are searched to determine the watch type.
- The letter, "A" in this example can range from A to J, but must be there for the ingest routines to work correctly.

❷ **UTC Time** - Must be future time.

❸ **UGC & Expiration Field** - UGC data for offices defined in section 2.1. #6.
- This information is broken down by state as shown in the example.
- The expiration time/date must be later than the issuance time/date, #3 of this figure.
- The UGC format expected is:
  - Two char state id
  - Followed by a C for county
  - Followed by a numeric list of county codes
- The Time/Date format expected is:
  - Two digit numeric day
  - Followed by four digit numeric time field
  - Always ending with a dash, "-"
  - or ddhhmm-

❹ **ATTN...WFO...** - followed by at least one WFO site id.

Figure 23 - SPC WCL product example with highlighted WWA key locations.

Appendix B

This appendix serves as a reference to key locations parsed in the SPC WOU product, by the WWA WOU ingest routine. The fields highlighted in figure 15 are searched to gather information by this routine and if missing or outside the expected format will cause the process to malfunction. This has been coordinated through the development process between SPC and MDL.

WOUS64 KWNS 261750
WOU1

❶TORNADO WATCH OUTLINE UPDATE FOR ❷WT 1002
NWS STORM PREDICTION CENTER NORMAN OK
❸1250 PM CDT SUN MAY 26 2001

TORNADO WATCH 1002 IS IN EFFECT UNTIL 8:00 PM CDT FOR
THE FOLLOWING LOCATIONS:

❹ARC013-019-025-027-029-033-039-045-047-051-053-057-059-061-
073-081-083-085-091-097-099-103-105-109-113-115-119-125-127-131-
133-139-149-270100-

AR
. ARKANSAS COUNTIES INCLUDED ARE

CALHOUN	CLARK	CLEVELAND
COLUMBIA	CONWAY	CRAWFORD
DALLAS	FAULKNER	FRANKLIN
GARLAND	GRANT	HEMPSTEAD
HOT SPRING	HOWARD	LAFAYETTE
LITTLE RIVER	LOGAN	LONOKE
MILLER	MONTGOMERY	NEVADA
OUACHITA	PERRY	PIKE
POLK	POPE	PULASKI
SALINE	SCOTT	SEBASTIAN
SEVIER	UNION	YELL

$$

❹LAC013-015-017-027-031-081-119-270100-

LA
. LOUSIANA PARISHES INCLUDED ARE

BIENVILLE	BOSSIER	CADDO
CLAIBORNE	DE SOTO	RED RIVER
WEBSTER		

$$

❹TXC037-063-067-183-203-315-365-459-270100-

TX
. TEXAS COUNTIES INCLUDED ARE

BOWIE	CAMP	CASS
GREGG	HARRISON	MARION
MORRIS	PAYOLA	UPSHUR

$$

❺ATTN...WFO...SHV...FTW...LZK...

❶ **TORNADO or SEVERE THUNDERSTORM** - are searched to determine the watch type.

❷ **WT # or WS #** - are searched for to retrieve the SPC managed watch number used in the WCN product which also includes the VTEC ETN.

❸ **Time/Date Line** - Must be current and be an earlier time than found in the expiration field, #4 in this figure.

❹ **UGC & Expiration Fields** - UGC data for offices defined in section 2.1. #6.
- This information is broken down by state as shown in the example.
- The expiration time/date must be later than the issuance time/date, #4 in this figure.
- The UGC format expected is:
  - Two char state id
  - Followed by a C for county
  - Followed by a numeric list of county codes
- The Time/Date format expected is:
  - Two digit numeric day
  - Followed by four digit numeric time field
  - Always ending with a dash, "-"
  - or *ddhhmm*-

❺ **ATTN...WFO...** - followed by at least one WFO site id.

Figure 24 - SPC WOU product example with highlighted WWA key locations.

Appendix C

This appendix provides a WMO header reference to determine the correct WMO ID when defining locally testing the WCL & WOU interactions with WWA. Checking updates to this information can be done by referencing: http://www.nws.noaa.gov/datamgmt/a2a/a2a.html

```
ABQWCNABQ WWUS65 KABQ     GTFWCNGTF WWUS65 KTFX     PHXWCNFGZ WWUS65 KFGZ
ALBWCNALY WWUS61 KALY     GTFWCNMSO WWUS65 KMSO     PHXWCNPHX WWUS65 KPSR
ALBWCNBGM WWUS61 KBGM     GTFWCNTFX WWUS65 KTFX     PHXWCNPSR WWUS65 KPSR
ALBWCNBTV WWUS61 KBTV     HUNWCNHUN WWUS64 KHUN     PHXWCNTWC WWUS65 KTWC
ARBWCNAPN WWUS63 KAPX     INDWCNFWA WWUS63 KIWX     PITWCNPBZ WWUS61 KPBZ
ARBWCNAPX WWUS63 KAPX     INDWCNIND WWUS63 KIND     PWMWCNCAR WWUS61 KCAR
ARBWCNDTX WWUS63 KDTX     JANWCNJAN WWUS64 KJAN     PWMWCNGYX WWUS61 KGYX
ARBWCNGRR WWUS63 KGRR     LAXWCNLAX WWUS66 KLOX     RDUWCNILM WWUS62 KILM
ATLWCNATL WWUS62 KFFC     LAXWCNLOX WWUS66 KLOX     RDUWCNMHX WWUS62 KMHX
BHMWCNBHM WWUS64 KBMX     LAXWCNSGX WWUS66 KSGX     RDUWCNRAH WWUS62 KRAH
BISWCNBIS WWUS63 KBIS     LBBWCNAMA WWUS64 KAMA     RNOWCNLKN WWUS65 KLKN
BISWCNFAR WWUS63 KFGF     LBBWCNEPZ WWUS64 KEPZ     RNOWCNREV WWUS65 KREV
BISWCNFGF WWUS63 KFGF     LBBWCNLBB WWUS64 KLUB     RNOWCNRNO WWUS65 KREV
BISWCNISN WWUS63 KBIS     LBBWCNMAF WWUS64 KMAF     RNOWCNVEF WWUS65 KVEF
BOIWCNBOI WWUS65 KBOI     LBBWCNSJT WWUS64 KSJT     SATWCNCRP WWUS64 KCRP
BOIWCNPIH WWUS65 KPIH     LITWCNLIT WWUS64 KLZK     SATWCNHGX WWUS64 KHGX
BOSWCNBOX WWUS61 KBOX     MEMWCNOHX WWUS64 KOHX     SDFWCNJKL WWUS63 KJKL
BUFWCNBUF WWUS61 KBUF     MIAWCNEYW WWUS62 KEYW     SDFWCNPAH WWUS63 KPAH
CAEWCNCAE WWUS62 KCAE     MIAWCNJAX WWUS62 KJAX     SDFWCNSDF WWUS63 KLMK
CAEWCNCHS WWUS62 KCHS     MIAWCNTAE WWUS62 KTAE     SEAWCNOTX WWUS66 KOTX
CAEWCNGSP WWUS62 KGSP     MIAWCNTBW WWUS62 KTBW     SEAWCNSEA WWUS66 KSEW
CHIWCNCHI WWUS63 KLOT     MKEWCNARX WWUS63 KARX     SEAWCNSEW WWUS66 KSEW
CHIWCNDVN WWUS63 KDVN     MKEWCNGRB WWUS63 KGRB     SFOWCNEKA WWUS66 KEKA
CHIWCNILX WWUS63 KILX     MKEWCNLSE WWUS63 KARX     SFOWCNHNX WWUS66 KHNX
CLEWCNCLE WWUS61 KCLE     MKEWCNMKE WWUS63 KMKX     SFOWCNSFO WWUS66 KMTR
CLEWCNILN WWUS61 KILN     MSPWCNDLH WWUS63 KDLH     SFOWCNSTO WWUS66 KSTO
CRWWCNRLX WWUS61 KRLX     MSPWCNRST WWUS63 KMPX     SJUWCNSJU WWCA62 TJSJ
CYSWCNCYS WWUS65 KCYS     NYCWCNOKX WWUS61 KOKX     SLCWCNSLC WWUS65 KSLC
CYSWCNRIW WWUS65 KRIW     OKCWCNOKC WWUS64 KOUN     STLWCNEAX WWUS63 KEAX
DENWCNDEN WWUS65 KBOU     OKCWCNTSA WWUS64 KTSA     STLWCNMCI WWUS63 KEAX
DENWCNGJT WWUS65 KGJT     OMAWCNGID WWUS63 KGID     STLWCNSGF WWUS63 KSGF
DENWCNPUB WWUS65 KPUB     OMAWCNGRI WWUS63 KGID     STLWCNSTL WWUS63 KLSX
DSMWCNALO WWUS63 KDMX     OMAWCNLBF WWUS63 KLBF     TOPWCNDDC WWUS63 KDDC
FSDWCNABR WWUS63 KABR     OMAWCNOMA WWUS63 KOAX     TOPWCNGLD WWUS63 KGLD
FSDWCNFSD WWUS63 KFSD     PDXWCNPDT WWUS66 KPDT     TOPWCNICT WWUS63 KICT
FSDWCNRAP WWUS63 KUNR     PDXWCNPDX WWUS66 KPQR     TOPWCNTOP WWUS63 KTOP
FTWWCNFTW WWUS64 KFWD     PDXWCNPQR WWUS66 KPQR     WBCWCNAKQ WWUS61 KAKQ
GTFWCNBYZ WWUS65 KBYZ     PHLWCNCTP WWUS61 KCTP     WBCWCNLWX WWUS61 KLWX
GTFWCNGGW WWUS65 KGGW     PHLWCNPHI WWUS61 KPHI      WBCWCNRNK WWUS61 KRN
```

Figure 25 - WCN AWIPS afos2awips.txt reference (WCN products only)