What is EMWIN?

EMWIN stands for the Emergency Management Weather Information Network. EMWIN is the primary system for distributing weather products within the United States. The core components of EMWIN are satellite and terrestrial communications networks operated by the National Weather Service. Virtually all text weather products produced by the National Weather Service and a variety of other government agencies are transmitted across EMWIN and can be received via the Internet, VHF or UHF radio, satellite, and various commercial weather products.

Raw EMWIN data is received into a piece of software called an Ingest, which parses the text to determine the type of product, its issue and expiration times, and the areas targeted by that product.

The Wakefield SKYWARN ham radio team operates a "home brew" EMWIN Ingest system which receives text products directly from the NOAA National Telecommunications Gateway as they are published – once every two minutes – and handles all of this processing within seconds. These products are disseminated to our team members in the form of e-mail alerts, and now selected SKYWARN partners can also opt to receive specific products of interest for any of the 66 counties and cities within the Wakefield County Warning Area (CWA).

A Note about System Availability and Reliability

As mentioned above, this is a "home brew" system built from the ground up to suit the needs of the ham radio communications team. We are making this system available to you as a convenience, but you should not rely on this system alone if you require reliable, immediate access to critical weather data. This system, its availability, and its response time are *good enough* for most users. Only you can understand your specific needs, and you should seek out redundant sources of weather information for critical decision support.

Accessing the Subscription Choices

In order to access the SKYWARN EMWIN system, first log in to the Situation Awareness Dashboard using your registered username and password. Then click on "E-mail Weather Alerts" in the left column. Not all account types qualify for access to EMWIN alerts, so you may not have this option. If you believe you should have access but don't, please notify **it.support@wx4akq.org** and someone will check on it for you.

Selecting Product Types

Once you have accessed the alerts page, you will see a list of product selections similar to that found on the next page. The first section lists the most commonly used products.

New users frequently ask "what should I start with?"

We recommend new subscribers begin with these products:

- SKYWARN Activation Notification
- SKYWARN EMWIN System Bulletin

- SKYWARN Radio Outage Notification

- SKYWARN Risk Assessment

- Flash Flood Warning

- Flood Warning

- Hazardous Weather Outlook

- Severe Thunderstorm Warning

- Severe Tstm/Tornado Watch Issue or Cancel

- Short Term Forecast

- Special Weather Statement

- Tornado Warning

- Winter Weather WWA

You may see other products of interest to you in the list. You may subscribe to as many or as few as you like, and you can change your selections at any time if you should find that you are receiving too many e-mails. Subscription changes take effect immediately.

You might want to add the hurricane and tropical weather products from the top section when a tropical weather system is forecast to impact our area. Because many of those products are not targeted at specific counties or zones, you will probably want to turn them back off after the tropical threat passes.

NWS Wakefield SKYWARN Amateur Radio Support Team WX4AKQ Wakefield, VA

Maintainer: Steve Crow

Common Product Selections (55 Available)	
☐ * MISCELLANEOUS SKYWARN BULLETIN	☐ PUBLIC TROPICAL CYCLONE ADVISORY
☐ * MISCELLANEOUS SKYWARN BULLETIN - URGENT	☐ SEVERE LOCAL STORM WATCH AND AREAL OUTLINE
☐ * SKYWARN ACTIVATION NOTIFICATION	☐ SEVERE STORM OUTLOOK NARRATIVE (AC)
☐ * SKYWARN AMATEUR RADIO TEAM NEWSLETTER	☐ SEVERE THUNDERSTORM WARNING
☐ * SKYWARN EMWIN System Bulletin	☐ SEVERE TSTM/TORNADO WATCH ISSUE OR CANCEL
☐ * SKYWARN FREE TEXT MESSAGE	☐ SEVERE WEATHER PROBABILITY 47/SWP
☐ * SKYWARN IT SYSTEMS BULLETIN	☐ SEVERE WEATHER STATEMENT
☐ * SKYWARN RADIO OUTAGE NOTIFICATION	☐ SHORT TERM FORECAST
☐ * SKYWARN RISK ASSESSMENT	☐ SIGMET (NORTHEAST U.S.)
☐ * SKYWARN STAFFING BULLETIN	☐ SPC CONVECTIVE OUTLOOKS
☐ * SKYWARN TEST MESSAGE	☐ SPC MESOSCALE DISCUSSION
☐ FLASH FLOOD STATEMENT	☐ SPC SEVERE TSTM WATCH PROB TABLES
☐ FLASH FLOOD WARNING	☐ SPC WATCH POINT INFORMATION MESSAGE
☐ FLASH FLOOD WATCH	☐ SPECIAL MARINE WARNING
☐ FLOOD STATEMENT	☐ SPECIAL WEATHER STATEMENT
☐ FLOOD WARNING	☐ SVR TSTM / TORNADO WATCH COUNTY NOTIFICATION
☐ HAZARDOUS WEATHER OUTLOOK	☐ TORNADO WARNING
☐ HURRICANE LOCAL STATEMENT	☐ TROPICAL CYCLONE ADVISORY
☐ LAW ENFORCEMENT WARNING	☐ TROPICAL CYCLONE DISCUSSION
☐ LIGHTNING DATA	☐ TROPICAL CYCLONE UPDATE
☐ LOCAL AREA EMERGENCY	☐ WATCH CLEARANCE MESSAGE
☐ LOCAL STORM REPORT	☐ WATCH OUTLINE
☐ MARINE WEATHER STATEMENT	☐ WATCH OUTLINE UPDATE
☐ MARINE WEATHER WARNING	☐ WATCH STATUS REPORT
☐ MISCELLANEOUS LOCAL PRODUCT	☐ WATCH UPDATES/CANCELLATIONS
☐ NON-PRECIPITATION WWA	☐ WINTER WEATHER WWA
☐ PUBLIC INFORMATION STATEMENT	☐ WSR-88D RADAR OUTAGE NOTIFICATION / FREE TEXT MESS
☐ PUBLIC SEVERE WEATHER OUTLOOK	

Common weather products available for subscription.

Below the "Common Product Selections" section is an additional batch of more advanced products that may be of interest to some users. Feel free to subscribe to as many as you would like.

Selecting Localities

Many EMWIN products are coded with a list of the counties or zones targeted by the product. This makes it possible to receive only the products of interest to your selected localities.

Our system separates localities by SKYWARN Area, as seen in this sample:

Area 1 Locality Selections (17 Available)	
☐ AMELIA COUNTY	☐ GOOCHLAND COUNTY
☐ CAROLINE COUNTY	☐ HANOVER COUNTY
☐ CHARLES CITY COUNTY	☐ HENRICO COUNTY
☐ CHESTERFIELD COUNTY	☐ KING WILLIAM COUNTY
☐ CITY OF COLONIAL HEIGHTS	☐ LOUISA COUNTY
☐ CITY OF HOPEWELL	☐ NEW KENT COUNTY
☐ CITY OF PETERSBURG	☐ POWHATAN COUNTY
☐ CITY OF RICHMOND	☐ PRINCE GEORGE COUNTY
☐ DINWIDDIE COUNTY	

Area 2 Locality Selections (8 Available)	
☐ BRUNSWICK COUNTY	☐ MECKLENBURG COUNTY
☐ CITY OF EMPORIA	☐ NORTHAMPTON COUNTY
☐ GREENSVILLE COUNTY	☐ NOTTOWAY COUNTY
☐ LUNENBURG COUNTY	☐ SOUTHAMPTON COUNTY

**NWS Wakefield SKYWARN
Amateur Radio Support Team
WX4AKQ Wakefield, VA**

Quick Reference Guide
EMWIN Alerts for SKYWARN Partners

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You must select at least one locality in order to receive alerts.

About Locality Codes

Each locality has both a county code and a zone code. Some products are addressed by county code, others are addressed by zone code. The locality code line in an EMWIN product looks like this:

`MDZ021>024-NCZ012>017-030>032-102-VAZ048-049-060>100-020322-`

...which means the product is targeted at Maryland zones 21 through 24; North Carolina zones 12 through 17, 30 through 32, and 102; and Virginia zones 48, 49, and 60 through 100, and is valid until 03:22 GMT on the 2nd day of the month.

In some instances, one county may have more than one zone. Additionally, a zone may span more than one county. For this reason, you may find yourself subscribed to a locality unexpectedly. If you happen to select a locality that shares a zone or county code with another locality, both localities will be treated as subscribed and will show up as a subscription in your list. To unsubscribe from one, you must unsubscribe from both. IT Support can help you sort this out if it becomes a problem.

In addition to the unique county and zone code for each locality, there is also a "statewide" county and zone code automatically subscribed. If you subscribe to even one locality in a given state, you will be subscribed to that state's "statewide" codes.

Unexplained Product Delivery

Occasionally you will receive products targeted at localities other than those you have selected. These generally fall into three categories:

1. Non-targeted products. These do not contain any locality information. Examples include the Local Storm Report and most Public Information Statements. Even if the product only contains information related to localities you are not subscribed to, you will still receive all of these because the product does not contain the code necessary to route the product.

2. Statewide targeted products. Some products are addressed only at an entire state. A common example is an SPC Mesoscale Discussion. You might receive a product that applies to one distant corner of the state, far outside our County Warning Area, if it is addressed to the "statewide" Virginia code (VAC000 or VAZ000).

3. New or unidentified Station ID. Sometimes a new Weather Forecast Office (WFO) or radar site identifier pops up which is not programmed into our database. This may cause some users to temporarily receive alerts for well outside our area, and commonly occurs with outlying areas such as Alaska and Puerto Rico. If you receive one of these, please forward it to **it.support@wx4akq.org** so we can update the system.

If you ever wonder why you have received a certain product, do not hesitate to forward it to **it.support@wx4akq.org** and ask about it. We will be happy to look into it for you.

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Internal SKYWARN Products

There are a few text products periodically generated by the team for its own operational purposes. These products use WMO product header ID's beginning with ZZUS and ZXUS, and are identified with an asterisk ("*") at the beginning of the product description on the subscription page. **These are not official products of the National Weather Service and should not be forwarded to other EMWIN services.**

Troubleshooting

If you are experiencing difficulty receiving your SKYWARN e-mail alerts, please check your Spam folder and/or set up an e-mail rule to ensure messages from **emwin-ingest@wx4akq.org** are delivered to your Inbox. You can filter on that sender address if you would like to forward messages or sort them into specific folders. Refer to your e-mail software documentation for assistance.

Users are encouraged to subscribe to the "SKYWARN EMWIN System Bulletin" product for information on updates to the EMWIN system. New product codes, office codes, locality codes, and scheduled downtime will be announced through that product.

Up-to-date system status information is always available from **http://status.wx4akq.org/**. Before contacting IT Support about a service outage or performance problem, check that site to see if we already know about it.

Finally, if you suspect a problem or continue to experience difficulty, please contact **it.support@wx4akq.org**. Technical support may not be available during times of severe weather as attention shifts to routine SKYWARN operations. Your request will be handled as quickly as possible.

For the Curious: Anatomy of an EMWIN Product

In case you're wondering, a typical EMWIN product is included on the next two pages. First, the intact EMWIN product as transmitted through the system. On the following page, the colored text explains the contents of the product.

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WFUS51 KAKQ 122130
TORAKQ
VAC033-085-101-122215-
/O.NEW.KAKQ.TO.W.0011.100812T2130Z-100812T2215Z/
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BULLETIN - EAS ACTIVATION REQUESTED
TORNADO WARNING
NATIONAL WEATHER SERVICE WAKEFIELD VA
530 PM EDT THU AUG 12 2010

THE NATIONAL WEATHER SERVICE IN WAKEFIELD HAS ISSUED A

* TORNADO WARNING FOR...
 EXTREME SOUTH CENTRAL CAROLINE COUNTY IN NORTH CENTRAL VIRGINIA...
   SOUTHEASTERN HANOVER COUNTY IN CENTRAL VIRGINIA...
   WEST CENTRAL KING WILLIAM COUNTY IN EAST CENTRAL VIRGINIA...

* UNTIL 615 PM EDT

* AT 525 PM EDT...NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED A
  SEVERE THUNDERSTORM CAPABLE OF PRODUCING A TORNADO. THIS DANGEROUS
  STORM WAS LOCATED NEAR DAWN...OR 6 MILES NORTHEAST OF ASHLAND...AND
  MOVING SOUTHEAST AT 30 MPH.

* THIS DANGEROUS STORM WILL BE NEAR...
  STUDLEY AROUND 545 PM EDT.
  MECHANICSVILLE AROUND 550 PM EDT.

OTHER LOCATIONS IMPACTED BY THIS DANGEROUS STORM INCLUDE ASHCAKE.

PLEASE SEND YOUR REPORTS OF HAIL AND OR WIND DAMAGE...INCLUDING TREES OR LARGE
LIMBS DOWNED...BY CALLING NOAA'S NATIONAL WEATHER SERVICE IN WAKEFIELD
AT...1...800...7 3 7...8 6 2 4.

PRECAUTIONARY/PREPAREDNESS ACTIONS...
TAKE COVER NOW. MOVE TO AN INTERIOR ROOM ON THE LOWEST FLOOR OF A STURDY
BUILDING. AVOID WINDOWS. IF IN A MOBILE HOME...A VEHICLE... OR OUTDOORS...MOVE
TO THE CLOSEST SUBSTANTIAL SHELTER AND PROTECT YOURSELF FROM FLYING DEBRIS.

&&

LAT...LON 3762 7719 3759 7738 3780 7745 3783 7736
TIME...MOT...LOC 2130Z 330DEG 26KT 3778 7737

$$

JM

WFUS51 KAKQ 122130
  WMO Product Code
  Site Identifier (KAKQ=Wakefield, VA)
  Issue Day, Hour, Minute (UTC)
TORAKQ
  AWIPS Product Code
VAC033-085-101-122215-
  Locality Code and Expiration:
  Virginia Counties 33, 85, and 101
  Expires 22:15 UTC on the 12th
/O.NEW.KAKQ.TO.W.0011.100812T2130Z-100812T2215Z/
  Valid Time Extent Code (VTEC)

BULLETIN - EAS ACTIVATION REQUESTED
TORNADO WARNING
NATIONAL WEATHER SERVICE WAKEFIELD VA
530 PM EDT THU AUG 12 2010
  Issue date and time

THE NATIONAL WEATHER SERVICE IN WAKEFIELD HAS ISSUED A

* TORNADO WARNING FOR...
  Plain-language product description
 EXTREME SOUTH CENTRAL CAROLINE COUNTY IN NORTH CENTRAL VIRGINIA...
  SOUTHEASTERN HANOVER COUNTY IN CENTRAL VIRGINIA...
  WEST CENTRAL KING WILLIAM COUNTY IN EAST CENTRAL VIRGINIA...
  Plain-language locality information, matches locality code line

<< *Product text goes here* >>

&&
  Section Delimiter: end of NOAA Weather Radio announcement

LAT...LON 3762 7719 3759 7738 3780 7745 3783 7736
TIME...MOT...LOC 2130Z 330DEG 26KT 3778 7737
  Coded coordinates and motion information

$$

JM
  End of product ($$) and forecaster name/initials/ID