

**Product Document Description:**  
**NWS Watches, Warnings and Advisories Using RSS and CAP XML**  
**Based Formats**

05/03/2005

**Part I - Mission Connection**

Product Description - Provide NWS Watches, Warnings and Advisories and similar products in three Internet based formats. Each format provides a channel for users to quickly access specific products. Products are organized by state and US territories, as well as a single file for the entire nation. Traditional html pages are provided for direct access by customers and citizens. Two data exchange formats using Extensible Markup Language (XML) are provided for customers and partners who wish to either display selected parts of the products or provide a display of the entire product.

The product homepage can be accessed at: <http://weather.gov/alerts/>

Also covered are the delivery of Tropical Prediction Center (TPC) tropical storm product headlines using the RSS format. Feeds include by ocean basin or per storm (wallet). These can be accessed at:

<http://www.nhc.noaa.gov/aboutrss.shtml>

A experimental RSS feeds of product headlines from the Storm Prediction Center (SPC). These can be accessed at:

<http://www.spc.noaa.gov/products/spcrss.xml>: This feed contains headlines related to daily outlooks, discussions and watches current issued by SPC.

<http://www.spc.noaa.gov/products/spcwwrss.xml> for SPC WW RSS which includes all tornado and severe thunderstorm watches and watch status reports

<http://www.spc.noaa.gov/products/spcmdrss.xml> for SPC MD RSS which includes all mesoscale discussions including severe weather, winter weather, etc.

Primary purpose - To replace specific functionality available from the IWIN website. IWIN contains webpages that list all current WWAs by state. This feature has proven very popular with users, especially state emergency managers. This was the single most requested feature mentioned in comments regarding the phase out of IWIN. In addition, over the past years, NWS has received a number of requests to make NWS data available in either RSS or other XML based feeds.

These HTML/RSS/CAP files are updated roughly every minute. The TPC and SPC RSS files are updated when a product package is updated.

Additional RSS feeds of watch/warning products now also provided based on NWS forecast zones. A web interface (<http://weather.gov/alerts/>) allows user to select a state, then browse a list of forecast zones to select a zone feed of their choice.

This product is considered experimental by the NWS. The purpose of an experimental product is to obtain user feedback on a new product. At the end of a fixed period, an evaluation is made to determine whether the product is useful enough to users to warrant the commitment of NWS resources to provide it permanently. In order to make this decision, user comments and input are solicited during the experimental period. This user input helps the NWS determine whether to continue the provision of the product and if so, it identifies changes that could be made to better serve user needs.

The experimental period for this prototype will be until May 31, 2005. Because the product is experimental, NWS does not guarantee it will be continuously available throughout this period. However, every effort will be made to assure reliable provision of this service, in particular during times when storms affect the prototype area.

Audience - The intended audience is emergency managers, partners, customers and the general public. The CAP format will be of special interest to emergency managers as CAP is becoming an important method to exchange alert messages. The RSS format will be of interest to those wishing to browse NWS product headlines quickly, followed by reading of selected products. RSS is particularly suited for the display of the headlines on workstation desktops and non-NWS webpages.

Presentation Format - This data is presented in three formats:

**HTML:** Hypertext Markup Language. These files are meant to be displayed using a World Wide Web browser. There is one HTML file for each US state and territory, and one for the entire nation. Each product listed on the HTML contains a hidden Anchor that allows hypertext links to be built that will take the user to that specific product.

**CAP:** Common Alerting Protocol. CAP is a XML based data format that is primarily targeted for machine to machine transfer. The CAP files contain the entire contents of the NWS WWA message. There is one CAP file for each US state and territory, and one that lists all active WWAs for the entire nation.

**RSS:** Sometimes referred to as Really Simple Syndication, the XML based RSS format is designed to allow syndication of news related headlines, with a hyperlink to the complete document.

Feedback Method - The NWS seeks to improve its services based on user feedback. A comment form is provided on the HTML/CAP/RSS webpage. Comments regarding these

product can also be sent to:

National Weather Service  
Attn: Robert Bunge, W/OCIO  
1325 East-West Highway #13460  
Silver Spring, MD 20901

Or via e-mail to: [robert.bunge@noaa.gov](mailto:robert.bunge@noaa.gov)

Or via a feedback link located at <http://www.nws.noaa.gov/alerts/>

## Part II - Technical Description

Format & Science Basis - Three sets of files, one for each state and territory, containing current NWS Watch Warnings and Advisories are updated about every minute and made available for public use via a web site. For each set of files, three formats are generated:

CAP: Common Alerting Protocol. These files contain the entire NWS product. Each state file contains a separate section for each WWA currently active in that state.

Example of a single product in CAP format:

```
<cap:info>
<cap:category>Met</cap:category>
<cap:event>FLOOD WATCH</cap:event>
<cap:urgency>Unknown</cap:urgency>
<cap:severity>Unknown</cap:severity>
<cap:certainty>Unknown</cap:certainty>
<cap:effective>2003-08-15 10:56:00</cap:effective>
<cap:expires>2003-08-16 04:00:00</cap:expires>
<cap:headline>
FLOOD WATCH
</cap:headline>
<cap:description>
```

AZZ001>003-CAZ029-160400-

BULLETIN - IMMEDIATE BROADCAST REQUESTED  
FLOOD WATCH  
NATIONAL WEATHER SERVICE LAS VEGAS NV  
355 AM PDT FRI AUG 15 2003

THE NATIONAL WEATHER SERVICE IN LAS VEGAS HAS ISSUED A FLASH FLOOD WATCH EFFECTIVE FROM NOON UNTIL 900 PM FRIDAY EVENING FOR PEOPLE IN THE FOLLOWING COUNTIES

IN NORTHWEST ARIZONA  
MOHAVE

IN SOUTHEAST CALIFORNIA  
EXTREME SOUTHEASTERN SAN BERNARDINO

A LOW PRESSURE SYSTEM MOVING FROM OLD MEXICO INTO THE DESERT SOUTHWEST WILL COMBINE WITH A MOIST AND UNSTABLE AIR MASS OVER NORTHWEST ARIZONA AND FAR SOUTHEAST CALIFORNIA TO PRODUCE

FAVORABLE CONDITIONS FOR HEAVY RAIN PRODUCING THUNDERSTORMS TODAY.  
STORMS THAT DEVELOP THIS AFTERNOON OVER THE ARIZONA RIM COUNTRY WILL BE STEERED SOUTHWEST TOWARD THE COLORADO RIVER. DEEP MOISTURE IN PLACE WILL ALLOW THESE STORMS TO DROP ONE TO TWO INCHES OF RAIN IN A SHORT PERIOD. IN ADDITION...REDEVELOPING THUNDERSTORMS MAY REPEATEDLY MOVE OVER THE SAME AREAS FOR INCREASED RUNOFF AND POSSIBLE FLASH FLOODING.

REMEMBER...A FLASH FLOOD WATCH MEANS THAT THERE IS A THREAT OF FLASH FLOODING IN AND CLOSE TO THE WATCH AREA. THOSE HIKING OR CAMPING SHOULD AVOID DRY STREAM BEDS AND WASHES AND STAY AWAY FROM NARROW CANYONS WHERE FLOOD WATERS CAN BECOME KILLERS. FLASH FLOODS CAN OCCUR MANY MILES FROM THE PARENT THUNDERSTORMS. BE READY TO MOVE TO HIGHER GROUND IF FLOODING IS OBSERVED OR A WARNING IS ISSUED.

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```
</cap:description>  
<cap:web>  
http://www.nws.noaa.gov/alerts/ca.html#CAZ029X0  
</cap:web>  
<cap:area>  
<cap:areaDesc>San Bernardino County,Upper Colorado River Valley,  
California</cap:areaDesc>  
<cap:geocode>006071</cap:geocode>  
</cap:area>  
</cap:info>
```

These files are currently posted using CAP 0.91a. Additional information on CAP is available from:

<http://www.incident.com/cap/index.html>

RSS: Sometimes referred to as Really Simple Syndication. These files contain only the headline of an NWS product, a hyperlink to a copy of the comment product, and a very brief description of the product. Each state file contains a separate section for each WWA currently active in that state.

Example of a single product in RSS format:

```
<item>
<title>
FLOOD WATCH - San Bernardino County,Upper Colorado River Valley, California
</title>
<link>
http://www.nws.noaa.gov/alerts/ca.html#CAZ029X0
</link>
<description>
FLOOD WATCH
Issued At: 2003-08-15 10:56:00
Expired At: 2003-08-16 04:00:00
Issuing Weather Forecast Office Website: http://www.wrh.noaa.gov/Lasvegas/
</description>
</item>
```

Example of a TPC generated RSS format:

```
<channel>
<title>National Hurricane Center (Atlantic)</title>
<link>http://www.nhc.noaa.gov</link>
<description>
Active tropical cyclones in the Atlantic, Caribbean, and the Gulf of Mexico
</description>
<copyright/>
<language>en-us</language>
<image>
<title>NOAA logo</title>
<url>http://www.nhc.noaa.gov/gifs/noaa_small.gif</url>
<link>http://www.nhc.noaa.gov/</link>
<width>45</width>
<height>45</height>
<description>NOAA logo</description>
</image>
<lastBuildDate>Fri, 24 Oct 2003 13:33:08 +0000</lastBuildDate>
<item>
<title>
TROPICAL DEPRESSION NICHOLAS Public Advisory Number 41
</title>
<link>
http://www.nhc.noaa.gov/text/refresh/MIATCPAT4+shtml/232036.shtml?
</link>
<description>Issued 5 PM AST THU OCT 23 2003</description>
</item>
<item>
<title>
```

TROPICAL DEPRESSION NICHOLAS Public Advisory Number 41(Spanish)

</title>

<link>

<http://www.nhc.noaa.gov/text/refresh/SJUTCPSP4+shtml/232109.shtml?>

</link>

<description>Issued 5 PM AST JUEVES 23 DE OCTUBRE DE 2003</description>

</item>

<item>

<title>

TROPICAL DEPRESSION NICHOLAS Forecast/Advisory Number 41

</title>

<link>

<http://www.nhc.noaa.gov/text/refresh/MIATCMAT4+shtml/232035.shtml?>

</link>

<description>Issued 2100Z THU OCT 23 2003</description>

</item>

<item>

<title>TROPICAL DEPRESSION NICHOLAS Discussion Number 41</title>

<link>

<http://www.nhc.noaa.gov/text/refresh/MIATCDAT4+shtml/232036.shtml?>

</link>

<description>Issued 5 PM EDT THU OCT 23 2003</description>

</item>

<item>

<title>

TROPICAL DEPRESSION NICHOLAS Probabilities Number 40

</title>

<link>

<http://www.nhc.noaa.gov/text/refresh/MIASPFAT4+shtml/231433.shtml?>

</link>

<description>Issued 11 AM AST THU OCT 23 2003</description>

</item>

<item>

<title>TROPICAL DEPRESSION NICHOLAS Maps and Charts</title>

<link>

[http://www.nhc.noaa.gov/refresh/graphics\\_astorm19+shtml/232058.shtml?](http://www.nhc.noaa.gov/refresh/graphics_astorm19+shtml/232058.shtml?)

</link>

<description>Latest tropical cyclone track maps and wind charts</description>

</item>

<item>

<title>TROPICAL DEPRESSION NICHOLAS Advisory Archive</title>

<link>

<http://www.nhc.noaa.gov/archive/2003/refresh/NICHOLAS+shtml/232044.shtml?>

</link>

<description>

Archive of all advisories released for this tropical cyclone

```
</description>
</item>
  <item>
<title>Special Tropical Disturbance Statement</title>
  <link>
http://www.nhc.noaa.gov/text/refresh/MIADSAAT+shtml/241330.shtml?
</link>
<description>Issued 930 AM EDT FRI OCT 24 2003</description>
</item>
</channel>
```

These files are currently posted using RSS 2.0. Additional information on RSS is available from:

<http://blogs.law.harvard.edu/tech/rss>

HTML: These are normal webpages: