



World Meteorological Organization (WMO)
Observing and Information Systems Department
WMO Information System (WIS)

Common Alerting Protocol (CAP)

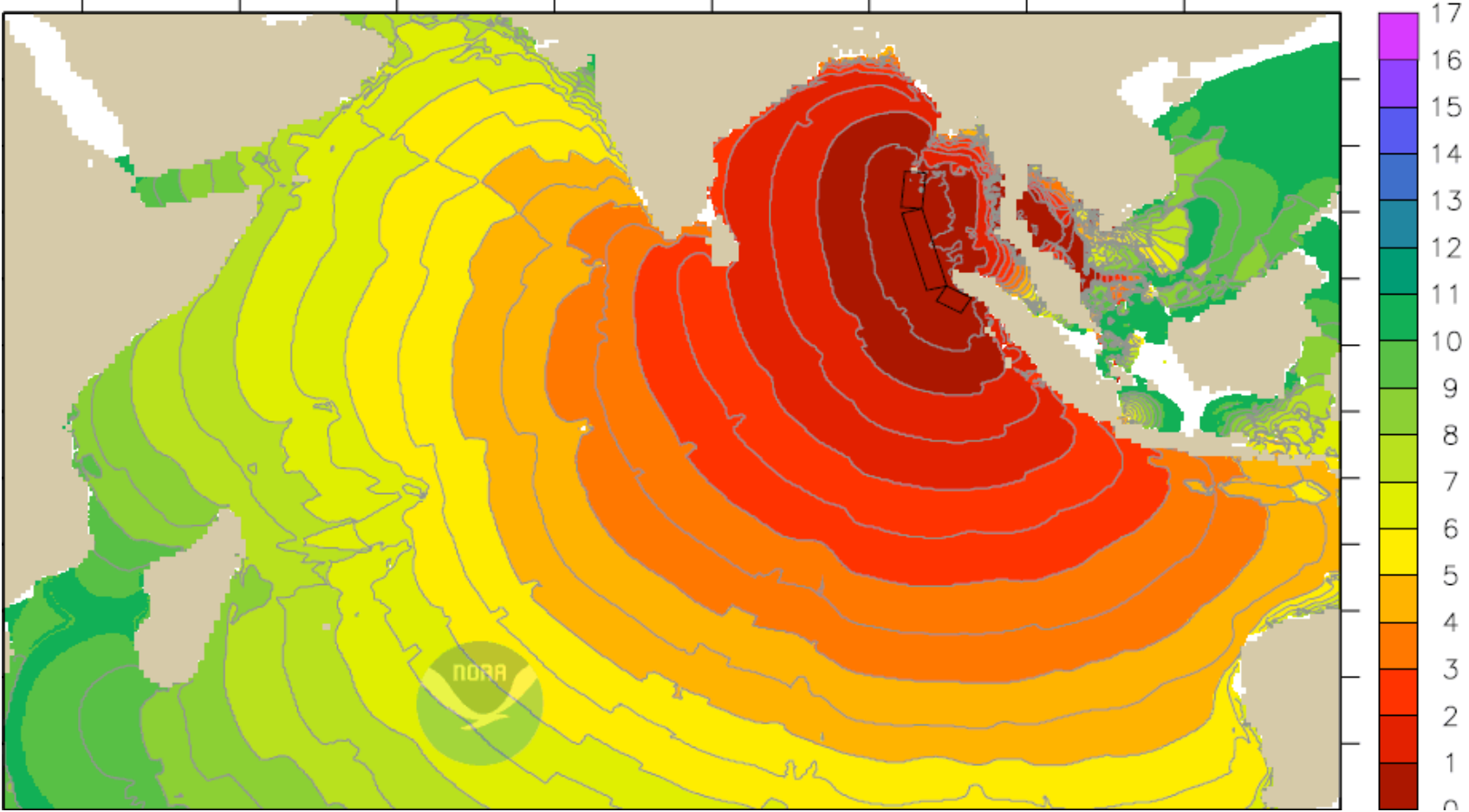
ITU Recommendation X.1303

Presented by
Eliot Christian <echristian@wmo.int>
Senior Scientific Officer for WIS



Alerting

Arrival Time of First Wave(hours) – 2004.12.26 Indonesian Tsunami

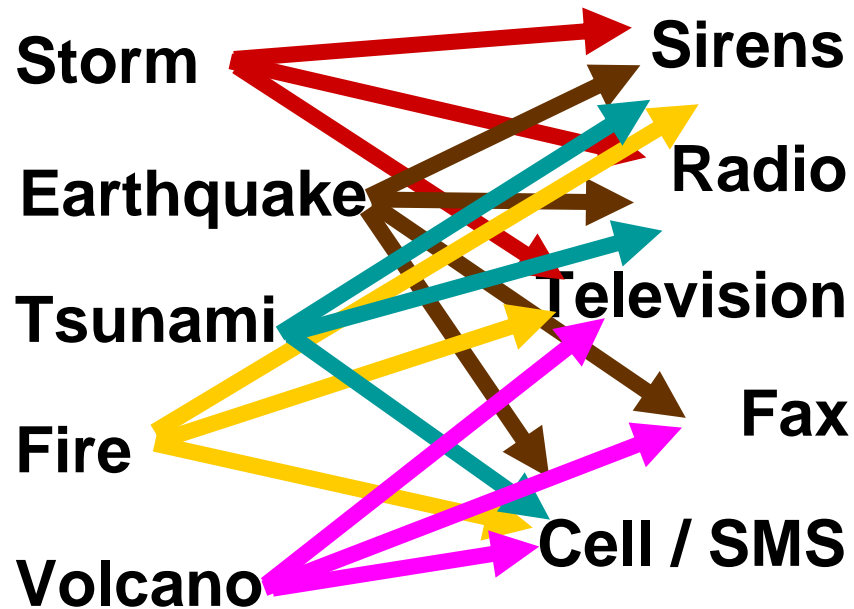




Different Systems

Another City / Province / Country

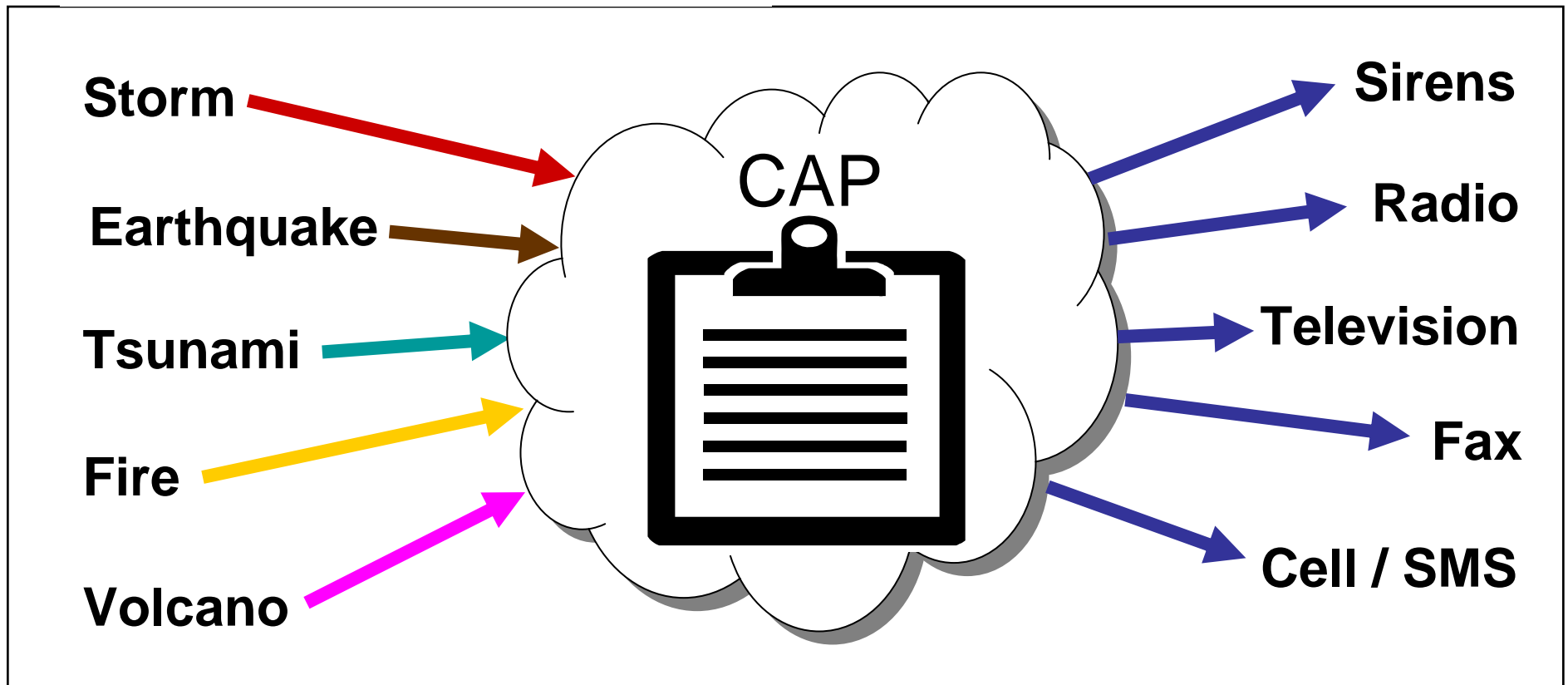
One City / Province / Country





CAP Message Format

Any City / Province / Country





All-Hazards, All-Media

Hazards (*weather, flood, fire, earthquake, volcano, landslide, disease, air quality, transportation problem, power outage, communications network problem ...*)

Media (*television, radio, telephone, cell phones, fax, highway signs, e-mail, Web sites, RSS "Blogs"...*)

Audience (*public, civic authorities, emergency responders, ambulance drivers, named persons*)



Example CAP Message

```
<identifier>KSTO1055887203</identifier>
<sender>KSTO@NWS.NOAA.GOV</sender>
<sent>2003-06-17T14:57:00-07:00</sent>
<status>Actual</status>
<msgType>Alert</msgType>
<scope>Public</scope>
<info>
  <category>Met</category>
  <event>Severe Thunderstorm</event>
  <responseType>Shelter</responseType>
  <urgency>Immediate</urgency>
  <severity>Severe</severity>
  <certainty>Observed</certainty>
  <senderName>National Weather Service Sacramento CA</senderName>
  <headline>Severe Thunderstorm Warning</headline>
  <description>Radar indicated a severe thunderstorm over Alpine County...
  moving southwest at 5 mph. Hail...intense rain and strong damaging winds
  are likely with this storm.</description>
  <instruction>take cover in a substantial shelter until the storm
  passes.</instruction>
  <area>
    <areaDesc>extreme north central Tuolumne County in California,
    extreme northeastern Calaveras County in California, southwestern
    Alpine County in California</areaDesc>
    <polygon>38.47,-120.14 38.34,-119.95 38.52,-119.74
    38.62,-119.89 38.47,-120.14</polygon>
  </area>
</info>
```



Text and Codes

```
<area>
```

```
<areaDesc>extreme north central Tuolumne County in California,  
extreme northeastern Calaveras County in California, southwestern  
Alpine County in California</areaDesc>
```

```
<polygon>38.47,-120.14 38.34,-119.95 38.52,-119.74  
38.62,-119.89 38.47,-120.14</polygon>
```

```
</area>
```

- Text values for human readers (such as "headline", "description", "instruction", "area description")
- Coded values useful for filtering, routing, and for automated translation to natural languages



Category of Hazard

- **Geo (geophysical)**
 - **Met (meteorological)**
 - **Safety**
 - **Security**
 - **Rescue**
 - **Fire**
 - **Health**
 - **Env (environmental)**
 - **Transport**
 - **Infra (infrastructure)**
 - **CBRNE**
(chemical, biological, radiological, nuclear, explosive)
 - **Other**
-

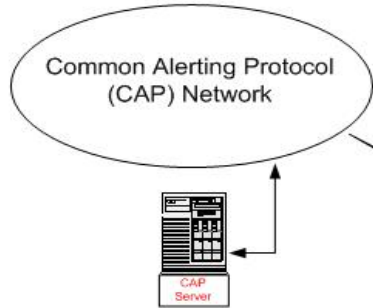


Urgency, Severity, Certainty

- **Urgency:** Timeframe for responsive action
(*Immediate, Expected, Future, Past, Unknown*)
 - **Severity:** Level of threat to life or property
(*Extreme, Severe, Moderate, Minor, Unknown*)
 - **Certainty:** Probability of occurrence
(*Very Likely, Likely, Possible, Unlikely, Unknown*)
-

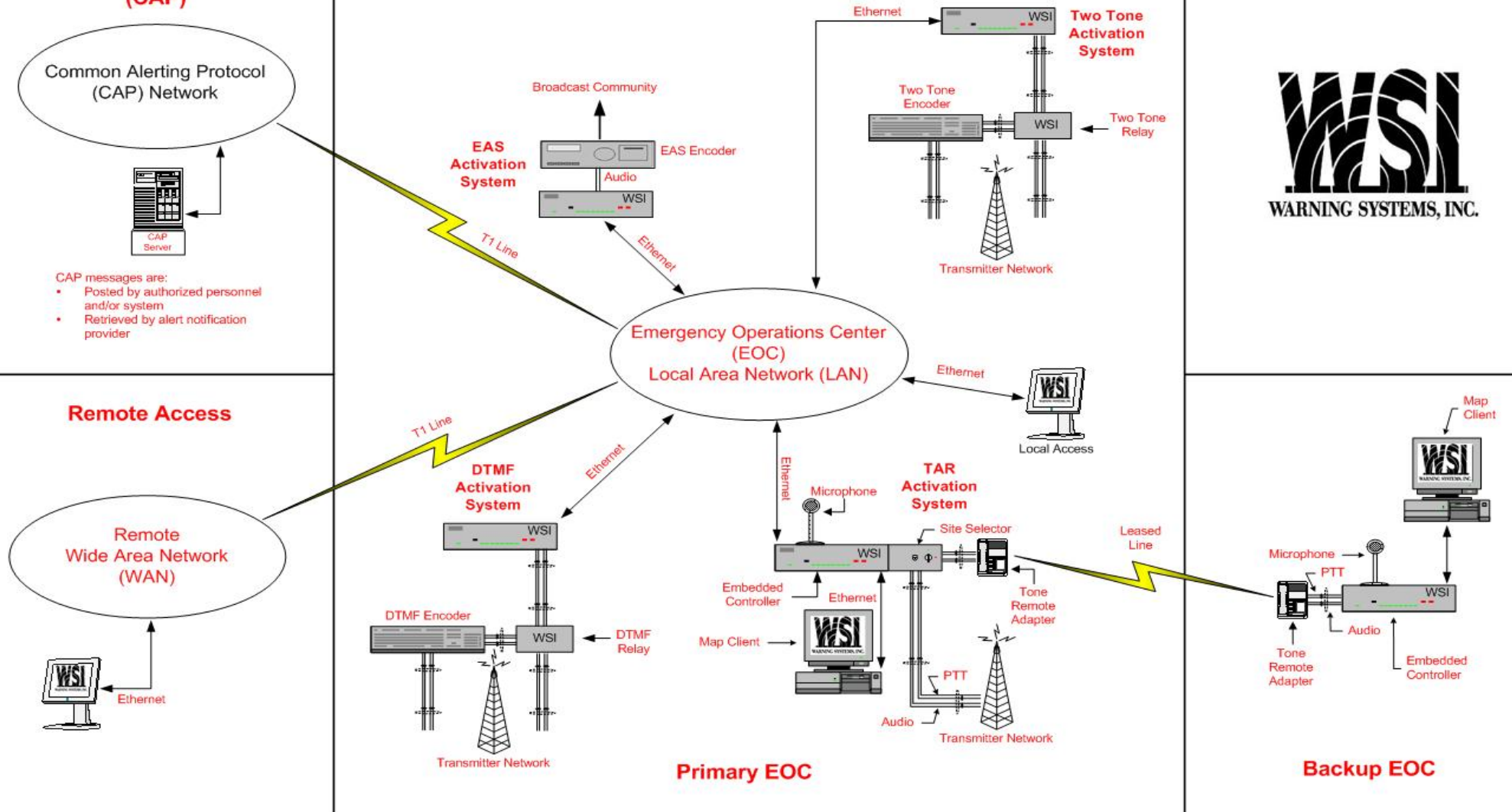
CAP-based Alerting System

Common Alerting Protocol (CAP)



- CAP messages are:
- Posted by authorized personnel and/or system
 - Retrieved by alert notification provider

Web Based OnAlert® Multi-System Activation Options



Primary EOC

Backup EOC



Local forecast by "City, St"

- Warnings
 - Current
 - By State/County...
- Observations
 - Radar
 - Satellite
 - Snow Cover
 - Surface Weather...
- Forecasts
 - Local
 - Graphical
 - Aviation
 - Marine
 - Hurricanes
 - Severe Weather
 - Fire Weather
 - Climate...
- Forecast Models
 - Numerical Models
 - Statistical Models...
- Weather Safety
 - Weather Radio
 - Hazard Assmt...
 - StormReady /
 - TsunamiReady
 - Education/Outreach

Home > Alerts

Experimental XML Feeds and Web Displays of Watches, Warnings, and Advisories

NOAA's National Weather Service offers several XML services
[\[Forecasts\]](#) [\[Watch/warnings\]](#) [\[Current Observations\]](#) [\[Tropical Cyclone Advisories\]](#) [\[Storm Prediction Center Forecast Products\]](#) [\[Change Notices\]](#)

This page provides access to NWS watches, warnings, advisories, and other similar products several different formats. Select a state or product name to view a list of active alerts in your web browser. These files are updated about every two minutes. Tropical Prediction Center/Storm Prediction center feeds are updated on an as needed basis. RSS and CAP/XML lists based on state and NWS forecast zones are provided to aid the automated dissemination of this information. More information on [RSS](#) and [CAP/XML](#) formats/feeds. This is an **experimental** product of the National Weather Service. [Comments and feedback](#) are welcome. A [Product Description Document](#) is also available.

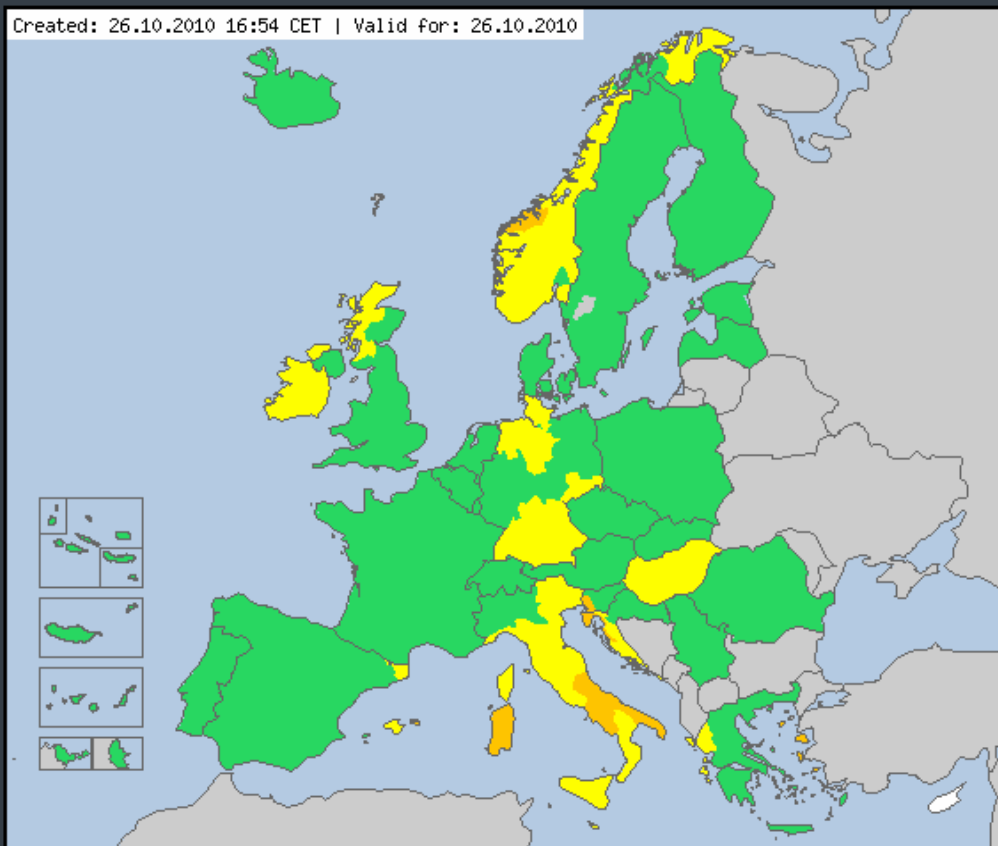
A | C | D | F | G | H | I | K | L | M | N | O | P | R | S | T | U | V | W | --U.S.--

	HTML/WEB	RSS	CAP	RSS
	By State			By County/Zone
Alabama		XML	CAP	XML
Alaska		XML	CAP	XML
America Samoa		XML	CAP	XML
Arizona		XML	CAP	XML
Arkansas		XML	CAP	XML
California		XML	CAP	XML

<http://www.weather.gov/alerts>

» Europe:

Created: 26.10.2010 16:54 CET | Valid for: 26.10.2010



Weather warnings: Europe



Awareness Reports - You can find detailed information about the warnings in the awareness reports issued for each country. Select the relevant country.

AT		
BE		
CH		
CY		
CZ		
DE		
DK		
EE		
ES		
FI		
FR		
GR		
HR		
HU		
IE		
IS		
IT		
LU		
LV		
MT		
NL		
NO		
PL		
PT		
RO		
RS		
SE		
SI		
SK		
UK		

awareness types:

Display:

Caption:

Change Language: | CZ | DA | DE | EE | EN | ES | ES | FI | FR | GR | HR | HU | IS | IT | LT | LV | MT | NL | NO | PL | PT | RO | RS | SI | SK | SV | VA

<http://www.meteoalarm.info/>

WMO Member: United States of America ISO 3166: US USA 840

Issuing Organization:

Hazard Categories : Geo Met Safety Security Rescue Fire Health Env
 Transport Infra CBRNE Other

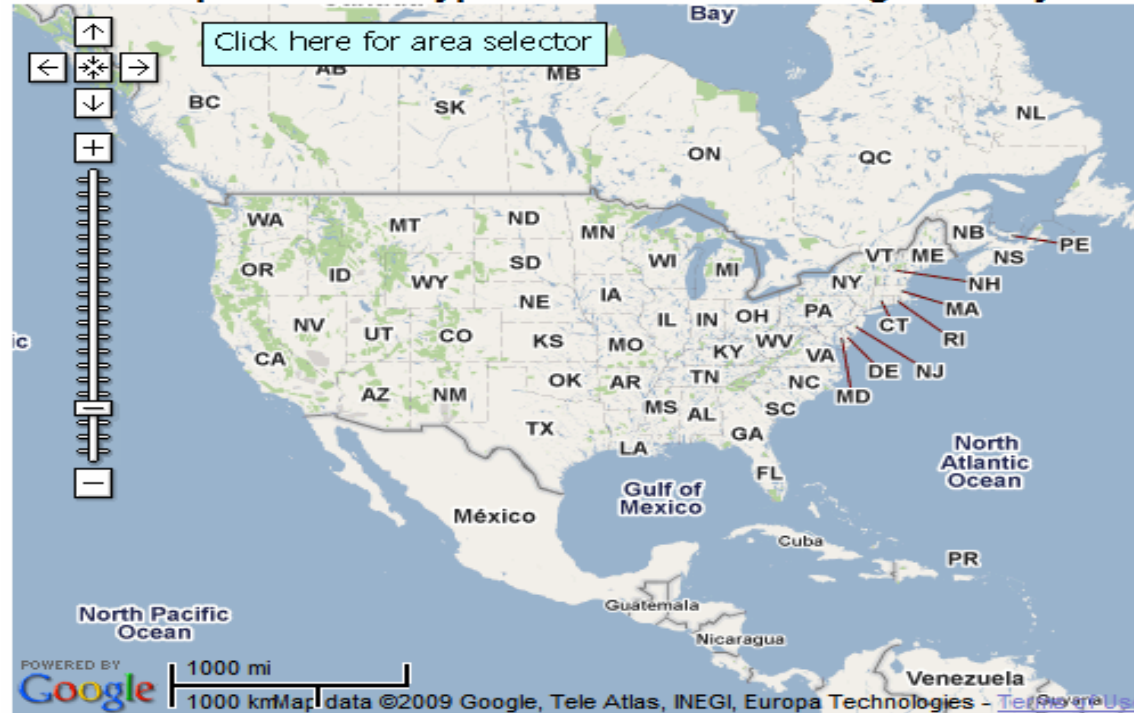
Authorization Basis:

CAP Feed URL:

Forecasts URL:

Editor:

Set the map view of the typical area for this alerting authority.



Hazard Categories

Geo: Geophysical (earthquakes, volcanoes, etc., includes landslide)

Met: Meteorological (weather, storms, etc. includes flood)

Safety: General emergency and public safety

Security: Law enforcement, military, homeland and local/private security

Rescue: Rescue and recovery

Fire: Fire suppression and rescue

Health: Medical and public health

Env: Pollution and other environmental

Transport: Public and private transportation

Infra: Utility, telecommunication, other non-transport infrastructure

CBRNE: Chemical, Biological, Radiological, Nuclear or High-Yield Explosive threat or attack

Other: Other events

<http://www.wmo.int/alertingorg>



Register of Alerting Authorities

- WMO Members can identify their officially recognized alerting authorities
 - Register has categories of alert messages, plus URL's for forecasts and CAP messages
 - International aggregators of alert messages and others can subscribe to a news feed to stay current with any changes to the register
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Key Points

- It makes no sense to have separate alerting systems for each type of hazard and for each communications medium
 - All societies deserve alerting systems designed to address all-media and all-hazards through common standards
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