

Pelmorex National Alert Aggregation & Dissemination System Official Document:

Title	Support for “Broadcast Immediately” Alerts
Document Type	Policy / Rule
Description	This policy sets out how the NAAD System will identify alert messages recommended for immediate broadcast
Date	As adopted by the Pelmorex Alerting Governance Council on November 20, 2014 for implementation April 1, 2015
Version	2.0
Replaces	V1.0 dated September 22, 2011
References	See also Attachment A: SOREM Alert Messages defined as “Broadcast Immediately” & NAAD System Test Message Policy V 1.0

This policy is updated to adopt the revised V2.0 SOREM “Broadcast Immediately” alert list, dated September 3, 2014. Specifically, the SOREM list was revised to include certain alerts with the event code <testMessage>. No other changes were made.

Senior Officials Responsible for Emergency Management (“SOREM”) has established a definitive list of Alert Message types recommended for immediate broadcast by last mile distributors based on a list of CAP-CP event codes and their respective CAP severity, urgency and certainty values.

Based on this list and as approved for implementation by the Pelmorex Alerting Governance Council, the NAAD System will include the addition of a “flag” within each individual info block contained in an Alert Message. The “flag” will indicate whether the Alert meets the criteria for immediate broadcast as established by SOREM. The “flag” will comply with any CAP/CAP-CP requirements and is set out below.

Where the alert meets the “broadcast immediately” requirements, the following will be added:

```
<parameter>  
<valueName>layer:SOREM:1:0:Broadcast_Immediately</valueName>  
<value>Yes</value>  
</parameter>
```

In all other cases:

```
<parameter>  
<valueName>layer:SOREM:1:0:Broadcast_Immediately</valueName>  
<value>No</value>  
</parameter>
```

Test Messages intended for distribution to the public will also be given a “yes” value.

Trusted Feeds will be expected to follow the same protocol.

This approach will allow equipment vendors and any participating Last Mile Distributor to easily identify high priority alert messages which meet the voluntary standard for immediate broadcast.

The NAAD System User interface must be modified to require NAAD Users to make a positive affirmation that the message is intended as recommended for immediate broadcast before the alert can be issued.

The NAAD System Heartbeat will not be modified as info blocks are not contained in the NAAD System Heartbeat.

Attachment A: SOREM Alert Messages defined as “Broadcast Immediately”
as adopted November 20, 2014 by the Pelmorex Alerting Governance Council for
implementation April 1, 2015.

**FEDERAL, PROVINCIAL TERRITORIAL SENIOR OFFICIALS RESPONSIBLE
FOR EMERGENCY MANAGEMENT**

**LIST OF EVENT CODES FOR EMERGENCY PUBLIC ALERT*
BROADCAST IMMEDIATE EVENTS, VERSION 2.0ⁱ**

The Urgency, Severity and Certainty codes listed below are the values that must exist in an information block in a Common Alerting Protocol (CAP) message in order for that information block to be considered Broadcast Immediate. Note: All three values must be jointly present to satisfy the criteria of Broadcast Immediate.

Event Code	CAP Code for Urgency ⁱⁱ	CAP Code for Severity ⁱⁱⁱ	CAP Code for Certainty ^{iv}	Additional Comments
airQuality	Immediate	Severe or Extreme	Observed	
civilEmerg	Immediate	Severe or Extreme	Observed	Definition is required but intention is to cover events such as large riots
terrorism	Immediate	Severe or Extreme	Observed	
animalDang	Immediate	Severe or Extreme	Observed	
wildFire	Immediate	Severe or Extreme	Likely or Observed	Definition required and maybe customized depending on regional significance
industryFire	Immediate	Severe or Extreme	Observed	
urbanFire	Immediate	Severe or Extreme	Observed	Definition required and maybe customized depending on regional significance
forestFire	Immediate	Severe or Extreme	Likely or Observed	
stormSurge	Immediate	Severe or Extreme	Observed	
flashFlood	Immediate	Severe or Extreme	Likely or Observed	
damOverflow	Immediate	Severe or Extreme	Likely or Observed	
earthquake	Immediate	Severe or Extreme	Likely or Observed	
magnetStorm	Immediate	Severe or Extreme	Likely or Observed	Not a thunderstorm. Can be solar flare
landslide	Immediate	Severe or Extreme	Likely or Observed	
meteor	Immediate	Severe or Extreme	Observed	
tsunami	Immediate	Severe or Extreme	Likely or Observed	
lahar	Immediate	Severe or Extreme	Likely or Observed	
pyroclasFlow	Immediate	Severe or	Likely or	

Event Code	CAP Code for Urgency ⁱⁱ	CAP Code for Severity ⁱⁱⁱ	CAP Code for Certainty ^{iv}	Additional Comments
		Extreme	Observed	
pyroclasticSurge	Immediate	Severe or Extreme	Likely or Observed	
volcanicAsh	Immediate	Severe or Extreme	Likely or Observed	
chemical	Immediate	Severe or Extreme	Observed	
biological	Immediate	Severe or Extreme	Observed	
radiological	Immediate	Severe or Extreme	Observed	
explosive	Immediate	Severe or Extreme	Likely or Observed	
fallObject	Immediate	Severe or Extreme	Observed	
drinkingWater	Immediate	Severe or Extreme	Observed	Impact to supply
amber	Immediate	Severe or Extreme	Observed	
hurricane	Immediate	Severe or Extreme	Observed	
thunderstorm	Immediate	Severe or Extreme	Observed	
tornado	Immediate	Severe or Extreme	Likely or Observed	
testMessage	Immediate	Minor	Observed	
911Service	Immediate	Severe or Extreme	Observed	Shutdown of service and call to action

It is important for all distributors of emergency alert messages to undertake a triage of ALL incoming CAP messages, regardless of whether they are flagged as “Broadcast Immediate” or not. This is because CAP messages which are issued to end active Broadcast Immediate alerts will not be flagged with Broadcast Immediate status. As such, if distributors were to only take action for Broadcast Immediate flagged alerts, they may continue to distribute an alert to the public after it has been cancelled by the alert issuing authority. Furthermore, multiple Broadcast Immediate alerts may be issued for a single emergency event, as the geographic area affected by the emergency may change or expand with time. In such a case, the existing Broadcast Immediate alert may be updated and a CAP message issued with additional geographic areas added. These updates contain no new information for the public in geographic areas that have been previously alerted; hence a given updated Broadcast Immediate CAP message may not be pertinent for a particular distributor (e.g. if new geographic areas are added outside the distributors’ geographic range), underlining the importance that distributors undertake a triage of all incoming CAP messages, regardless of their frequency or Broadcast Immediate status.

**“Emergency Public Alert” is defined in the NAAD System Authorized User Agreements as an “Alert Message issued by an Authorized Government Agency or an Authorized User in respect of an imminent or unexpected threat to life caused by severe weather disturbances, natural disasters or other emergencies that meets the criteria for immediate distribution in the Standards.”

Footnotes:

ⁱ (replaces connotative 1.0 version titled “FPT EXPANDED PREPAREDNESS WORKING GROUP FEDERAL PROVINCIAL TERRITORIAL LIST OF EVENT CODES FOR EMERGENCY PUBLIC ALERT BROADCAST INTRUSIVE EVENTS” dated September 21, 2010)

ⁱⁱ URGENCY CODES AS DEFINED IN THE CAP STANDARD

- “Immediate” - Responsive action SHOULD be taken immediately
- “Expected” - Responsive action SHOULD be taken soon (within next hour)
- “Future” - Responsive action SHOULD be taken in the near future
- “Past” - Responsive action is no longer required
- “Unknown” - Urgency not known

ⁱⁱⁱ SEVERITY CODES AS INTERPRETED BY SOREM FOR THIS EMERGENCY PUBLIC ALERT BROADCAST IMMEDIATE EVENT LIST (MODIFIED FROM THE CAP STANDARD DEFINITION)

- “Extreme” - Extraordinary threat to life
- “Severe” - Significant threat to life
- “Moderate” - Possible threat to life
- “Minor” – Minimal to no known threat to life
- “Unknown” - Severity unknown

^{iv} CERTAINTY CODES AS DEFINED IN THE CAP STANDARD

- “Observed” – Determined to have occurred or to be ongoing
- “Likely” - Likely ($p > \sim 50\%$)
- “Possible” - Possible but not likely ($p \leq \sim 50\%$)
- “Unlikely” - Not expected to occur ($p \sim 0$)
- “Unknown” - Certainty unknown

**ANNEX:
EVENT CODE DESCRIPTIONS FOR EMERGENCY PUBLIC ALERT
BROADCAST IMMEDIATE EVENTS**

The creation of this evergreen list of broadcast intrusive events was guided by the general principles of risk management, and includes all of the types of events which experienced emergency managers consider to be high consequence and low probability. Low impact events happen every day; higher impact events are rare. Not all events on this list apply to all areas. Weather events are dictated by geography and climatology so some Provinces / Territories will experience far fewer or different types of events than others. The list contains events, which if they meet a certain threshold (urgency, severity, certainty), would require an immediate broadcast of an alert to the public.

Event Code	CAP Code for Urgency ⁱⁱ	CAP Code for Severity ⁱⁱⁱ	CAP Code for Certainty ^{iv}	Additional Comments	Description
airQuality	Immediate	Severe or Extreme	Observed		Air Quality: An elevated particulate count in the atmosphere which negatively affects visibility or the health of individuals in the affected area or downwind of the area.
civilEmerg	Immediate	Severe or Extreme	Observed	Definition is required but intention is to cover events such as large riots	Civil Emergency: Human activities resulting in the disrupting of services or requiring varying levels of support, law enforcement or attention.
terrorism	Immediate	Severe or Extreme	Observed		Terrorism: An act or omission that can include the use of violence or threats of violence by individuals or groups against civilians or infrastructure, that is intended to intimidate the public with respect to its security, including its economic security.
animalDang	Immediate	Severe or Extreme	Observed		Animal Danger: A dangerous or threatening animal (wild or domesticated).
wildFire	Immediate	Severe or Extreme	Likely or Observed	Definition required and maybe customized depending on regional significance	Wild Fire: A fire involving natural combustibles (including grass, brush and trees) that has the ability to impact a community.
industryFire	Immediate	Severe or Extreme	Observed		Industrial Fire: A large fire that impacts an industrial building or complex and poses a threat to human health.

Event Code	CAP Code for Urgency ⁱⁱ	CAP Code for Severity ⁱⁱⁱ	CAP Code for Certainty ^{iv}	Additional Comments	Description
urbanFire	Immediate	Severe or Extreme	Observed	Definition required and maybe customized depending on regional significance	Urban Fire: A large fire that impacts multiple residential and/or commercial properties.
forestFire	Immediate	Severe or Extreme	Likely or Observed		Forest Fire: A wildfire or prescribed fire that is burning in forested areas, grass, or alpine/tundra vegetation and that poses a threat to human safety.
stormSurge	Immediate	Severe or Extreme	Observed		Storm Surge: An abnormal rise in sea level accompanying a hurricane or other intense storm that threatens coastal areas.
flashFlood	Immediate	Severe or Extreme	Likely or Observed		Flash Flood: The sudden onset of water causing immediate flooding often occurs from river ice jams and excessive unexpected rainfall. They present a unique danger to life and safety since they can often catch children, the elderly and the vulnerable off guard as there is little or no warning that this event will occur.
damOverflow	Immediate	Severe or Extreme	Likely or Observed		Dam Overflow: An overflowing or failure of a dam or reservoir that will affect areas downstream. An alert is issued only in the case of imminent flooding with an extremely short warning time.
earthquake	Immediate	Severe or Extreme	Likely or Observed		Earthquake: A sudden release of energy in the Earth's crust that creates seismic waves which can cause substantial damage, especially in urban environments.
magnetStorm	Immediate	Severe or Extreme	Likely or Observed	Not a thunderstorm. Can be solar	Geomagnetic Storm: A worldwide disturbance of the earth's magnetic field that can

Event Code	CAP Code for Urgency ⁱⁱ	CAP Code for Severity ⁱⁱⁱ	CAP Code for Certainty ^{iv}	Additional Comments	Description
				flare	disable electronic devices and infrastructure.
landslide	Immediate	Severe or Extreme	Likely or Observed		Landslide: A general term for a wide variety of processes and landforms involving the down slope movement under the force of gravity of masses of soil and rock material that can threaten communities and infrastructure located in its path.
meteor	Immediate	Severe or Extreme	Observed		Meteorite: A natural object of extraterrestrial origin (meteoroid) that survives passage through the atmosphere and hits the ground with the potential for catastrophic damage.
tsunami	Immediate	Severe or Extreme	Likely or Observed		Tsunami: A gravitational sea wave produced by any large-scale, short-duration disturbance of the ocean floor that can devastate coastal areas.
lahar	Immediate	Severe or Extreme	Likely or Observed		Lahar: A flowing mixture of water-saturated rock debris that forms on the slopes of a volcano, moves downslope under the force of gravity, and can threaten communities situated near the volcano.
pyroclasFlow	Immediate	Severe or Extreme	Likely or Observed		Pyroclastic Flow: High density flow of solid volcanic fragments suspended in gas which flows downslope from a volcanic vent that can threaten communities located near volcanoes.
pyroclaSurge	Immediate	Severe or Extreme	Likely or Observed		Pyroclastic Surge: Turbulent, low-density cloud of hot rock debris and gases, ejected during a volcanic eruption, that moves over the ground surface at high speed and can threaten communities situated near volcanoes.

Event Code	CAP Code for Urgency ⁱⁱ	CAP Code for Severity ⁱⁱⁱ	CAP Code for Certainty ^{iv}	Additional Comments	Description
volcanicAsh	Immediate	Severe or Extreme	Likely or Observed		Volcanic Ash: Dust or particles emitted by a volcano during an eruption. They may remain suspended in the atmosphere for long periods and can disrupt flights, aggravate respiratory conditions and interfere with telecommunication infrastructure.
chemical	Immediate	Severe or Extreme	Observed		Chemical: A chemical substance that, if misused or improperly released could result in psychological disorientation, serious injury, incapacitation or death.
biological	Immediate	Severe or Extreme	Observed		Biological: A potentially dangerous poisonous substance that is a specific product of the metabolic activities of a living organism and is usually very unstable and can easily be transferred between organisms.
radiological	Immediate	Severe or Extreme	Observed		Radiological: A potentially dangerous substance that in sufficient concentration can damage the environment or human health.
explosive	Immediate	Severe or Extreme	Likely or Observed		Explosive: A potentially dangerous substance, including a device, which may explode (i.e. an extremely rapid release of gas and heat).
fallObject	Immediate	Severe or Extreme	Observed		Falling Object: Natural or human made materials descending by force of gravity that poses a threat to persons or property.
drinkingWate	Immediate	Severe or Extreme	Observed	Impact to supply	Drinking Water Contamination: When water quality may be negatively impacted and may require a boil water advisory, or may not be consumed or used by the public.

Event Code	CAP Code for Urgency ⁱⁱ	CAP Code for Severity ⁱⁱⁱ	CAP Code for Certainty ^{iv}	Additional Comments	Description
amber	Immediate	Severe or Extreme	Observed		Amber Alert: Issued by police services when a child has been abducted and it is believed that his/her life is in grave danger. An Amber Alert provides the public with immediate and up-to-date information about a child abduction and solicits the public's help in the safe and swift return of the child.
hurricane	Immediate	Severe or Extreme	Observed	Shutdown of service and call to action	Hurricane: A violent storm which brings intense winds, heavy rain, a storm surge, floods, coastal erosion and landslides, that can threaten communities and infrastructure in its path.
thunderstorm	Immediate	Severe or Extreme	Observed		Thunderstorm: A local storm accompanied by thunder and lightning that poses a threat to persons.
tornado	Immediate	Severe or Extreme	Observed		Tornado: A violent storm with very strong circular winds, often forming a funnel shape, that poses a threat to persons.
testMessage	Immediate	Minor	Observed		Test Message: A test message may be issued for either public awareness or technical testing purposes. The USC values indicated here are for the public awareness alerts.
911Service	Immediate	Severe or Extreme	Observed	Shutdown of service and call to action	911 Service: Disruption or outage of telecommunication services between the public and emergency responders.