Environment Canada and the Common Alerting Protocol (CAP) (Information Sheet)

3 – Status of CAP Alerts by event as issued by Environment Canada

Title:	Environment Canada and the Common Alerting Protocol (CAP) 3 - Status of CAP Alerts by event as issued by Environment Canada
Description:	Identification of the weather and environmental events and hazards which, if significant, will trigger a *warning* from Environment Canada; that will then in turn trigger a CAP Alert message in our implementation of the Common Alerting Protocol using the Canadian Profile (CAP-CP)
Date:	March 1, 2016
Version:	2.0
Replaces:	1.0
Reference:	Refer additionally to the following information sheets: *1 - General Overview*

Purpose of this Document

This document discusses the weather and environmental hazardous events that give cause for Environment Canada to issue an alert and that will be available through the Environment Canada implementation of the Common Alerting Protocol (CAP).

Events and Hazards

Environment Canada currently issues *warnings* for a number of weather and environmental hazardous events. However, not every event will reach a level of significance of hazard that meets or exceeds the criteria that will result in the issuance of a *warning*. When it does, EC forecasters will issue an alert message formalized in bulletin form. These alerts take the form of a CAP-XML file containing the warning, watch, advisory or statement. (See *1- General Overview* for a discussion of *warnings*). When one of these *warnings* is issued, updated or ended; subsequent CAP Alert messages will be generated and passed on to clients.

Sectors

Within Environment Canada, there are a number of audience *sectors*[1] that *warnings* are disseminated too, and under this classification we can list different classes of phenomena that fall into an audience sector. The biggest sector we address is the "public" sector, but sectors also include the "aviation" and "marine" sectors. The process of getting *warnings* out for the public sector in CAP-XML is nearly complete, while for the marine sector we are only partially there, and for "aviation" sector there are no plans as yet. The current CAP readiness status of each sector is as follows…

- Public (all warnings and watches)
- Public (all advisories and statements)
- Marine (shorter duration convective warnings and advisories)
- Aviation (none)

The following are planned mid term additions (from 1 to 3 years)

- Marine (remaining longer duration synoptic warnings, watches and advisories)
- Marine (Marine Ice warnings)

The following are not planned due to extenuating circumstances (further details below)

- Aviation (warnings)

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[1] As identified by Services and Dissemination within the Meteorological Service of Canada.

Programs

Within Environment Canada there are a number of ***Programs*** that create and administer policy on what goes into the generation of *warnings.*for that program (criteria used, update frequency, etc....) Once these rules for generating a warning are established, all the warnings are then physically generated using the same methods so that Services and Dissemination can have equal access to them all in a consistent manner. CAP, as a Dissemination mechanism, presents all the warnings in a single consistent manner for all clients of CAP to use.

Which CAP-CP event references are available in CAP-CP format from Environment Canada?

Based on the CAP-CP event references beta 0.4, the following hazardous events are alerted for, or could be alerted for, in CAP messages from Environment Canada…

CAP-CP (v0.4) Tier I or Tier II Name [1]	CAP-CP (v0.4) Event Code [1]	Currently Available in CAP from EC	EC Sector	EC Program	Notes
volcanic ash cloud	volcanicAsh	No	Aviation	Aviation	At elevation, so may never be done in CAP by EC for the public
air quality	airQuality	Yes	Public	Health & Air Quality	Joint Authority with third parties [2]

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[1] Any discrepancy between the values given here and with the published CAP-CP value is unintentional. The posted CAP-CP value shall be considered the correct value.

[2] Information on "joint third parties" or "selected areas" is the responsibility of the Programs within EC.

CAP-CP (v0.4) Tier I or Tier II Name [1]	CAP-CP (v0.4) Event Code [1]	Currently Available in CAP from EC	EC Sector	EC Program	Notes
cold wave	coldWave	No	Public	Health & Air Quality	No longer explicitly issued by EC. This hazardous event is now covered as part of the EC extreme cold alert [3]
heat wave	heatWave	No	Public	Health & Air Quality	No longer explicitly issued by EC. This hazardous event is now covered as part of the EC heat alert [3]
high heat and humidity	heatHumidity	No	Public	Health & Air Quality	No longer explicitly issued by EC. This hazardous event is now covered as part of the EC heat alert [3]
wind chill	windChill	No	Public	Health & Air Quality	No longer explicitly issued by EC. This hazardous event is now covered as part of the EC heat alert [3]
freezing spray	freezngSpray	No	Marine	Marine	Future
gale wind	galeWind	No	Marine	Marine	Future
high water level	highWater	Yes	Marine	Marine	

[3] In 2013, Environment Canada consolidated several named alerts in two alerts, the "extreme cold" and the "heat" alerts. Any temperature related hazards such as wind chill, high humidity, heat wave, etc… that were considered significant enough to be alerted on, were consolidated into these two named alerts. The details of the hazard are then to be discussed within the content of the message that comes with the alert. At present, the EC CAP process cannot distinguish the tier II factors that make up the alert so the CAP message uses the general CAP-CP tier I entry for these alerts.

CAP-CP (v0.4) Tier I or Tier II Name [1]	CAP-CP (v0.4) Event Code [1]	Currently Available in CAP from EC	EC Sector	EC Program	Notes
hurricane force wind	hurricFrcWnd	No	Marine	Marine	Future
ice pressure	icePressure	No	Marine	Ice	Future
iceberg	iceberg	No	Marine	Ice	Unknown
rapid closing of coastal leads	rpdCloseLead	No	Marine	Ice	Future
special ice	spclIce	No	Marine	Ice	Future
special marine	spclMarine	Yes	Marine	Marine	
squall	squall	Yes	Marine	Marine	For selected areas [4]
storm force wind	stormFrcWnd	No	Marine	Marine	future
strong wind	strongWind	No	Marine	Marine	future
tsunami	Tsunami	Yes	Public	Marine[5]	Joint Authority with third party in selected areas [2,5]
Water spout	waterspout	Yes	Marine	Marine	For selected areas [4]
arctic outflow	arcticOut	Yes	Public	Public	For selected areas [4]
blizzard	blizzard	Yes	Public	Public	

[4] Environment Canada issues some alerts for selected areas only. This is the jurisdiction of the Programs that oversee the policy addressing the response to the identified hazard.

[5] Even though this hazard falls under the Public Sector, it is currently the responsibility of the Marine program within EC

CAP-CP (v0.4) Tier I or Tier II Name [1]	CAP-CP (v0.4) Event Code [1]	Currently Available in CAP from EC	EC Sector	EC Program	Notes
blowing snow	blowingSnow	Yes	Public	Public	
dust storm	dustStorm	Yes	Public	Public	For selected areas [4]
flash freeze	flashFreeze	Yes	Public	Public	For selected areas [4]
freezing drizzle	freezeDrzl	Yes	Public	Public	For selected areas [4]
freezing rain	freezeRain	Yes	Public	Public	
frost	frost	Yes	Public		For selected areas [4]
hurricane	hurricane	Yes	Public		
rainfall	rainfall	Yes	Public		
snow squall	snowSquall	Yes	Public		For selected areas [4]
snowfall	snowfall	Yes	Public		
storm surge	stormSurge	Yes	Public		For selected areas [4]
thunderstorm	thunderstorm	Yes	Public		
tornado	tornado	Yes	Public		
tropical storm	tropStorm	Yes	Public		
weather	weather	Yes	Public		
wind	wind	Yes	Public		Including specific location based wind warnings such as "Les Suetes" and "Wreckhouse" [4]
winter storm	winterStorm	Yes	Public		