Thunderstorm Outlook Graphical Products

This page describes the Thunderstorm Outlook Graphical products. The Thunderstorm Outlook depicts the expected geographic areas of thunderstorms in Canada. Thunderstorm Outlooks are issued by storm prediction centres across Canada once per day at around 12:00 pm regional local time during the convective season each year.

Forecasters may choose from four time periods for which the Thunderstorm Outlook is valid.

- Day 1 (PM) – Valid from 12pm to 12am on the same day it was issued.
- Day 2 (AM) – Valid from 12am to 12pm on the day after it was issued.
- Day 2 (PM) – Valid from 12pm to 12am on the day after it was issued.
- Day 3 (full day) – Valid from 12am to 12am two days after it was issued.

Furthermore, the forecaster could provide information for more than one time period by creating separate Thunderstorm Outlooks for each time period.

Subsequent amendments to existing Thunderstorm Outlooks are issued on an as-needed basis during the day. The Thunderstorm Outlook may not be updated with active severe weather alerts. Users are asked to check with the latest watches and warnings for the most current conditions.

Data location

The graphical product can be accessed at:

https://hpfx.collab.science.gc.ca/[YYYYMMDD]/thunderstorm_outlooks/[ASPC,OSPC,PASPC,PSPC,QSPC]/

where:

- YYYYMMDD: represents the date of interest
- ASPC,OSPC,PASPC,PSPC,QSPC: represents the storm prediction centres that issue the products

File name nomenclature

File names have the form:

Thunderstorm-[SPC-CODE]-[REGION]-[**validity_datetime** minus **publication_datetime**]-cor_v[**amendment**].png

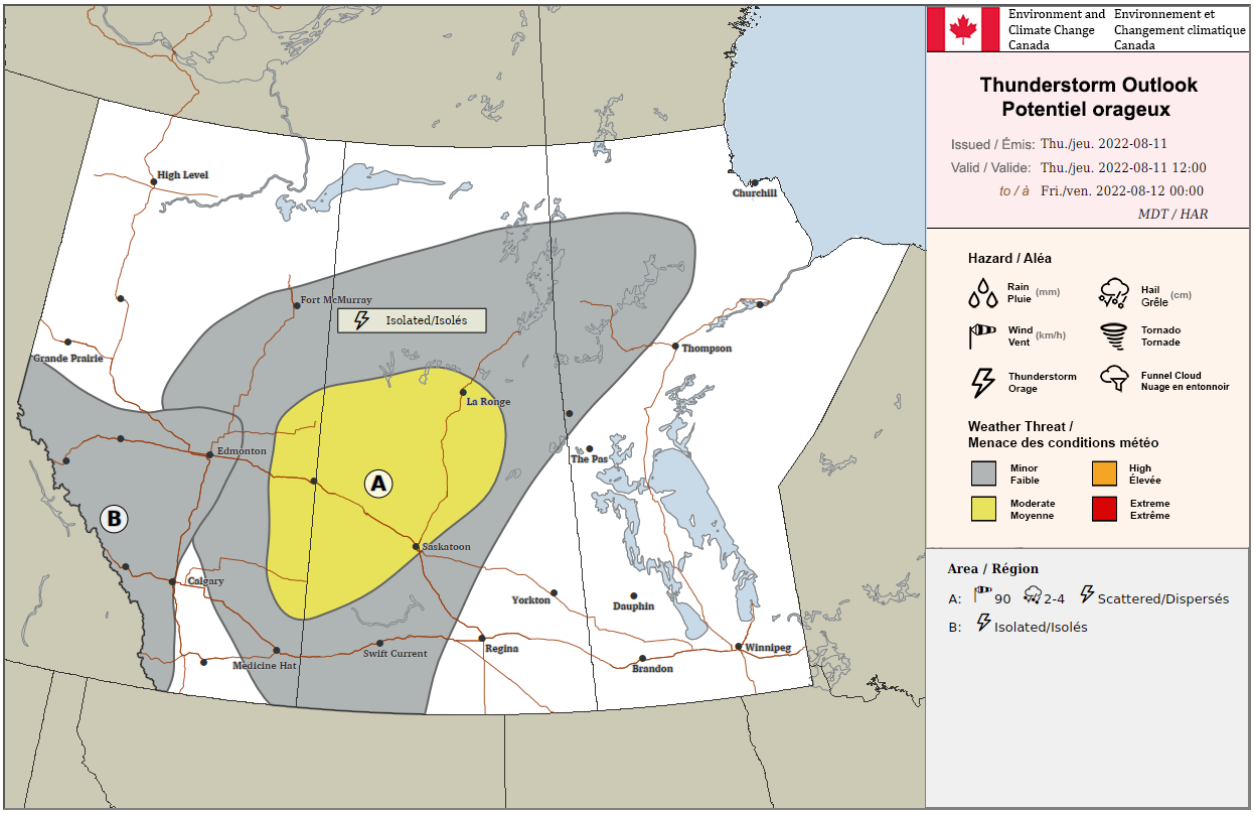
- All hours are in UTC.
- SPC-CODE: Storm Prediction Centre code (ASPC,OSPC,PASPC,PSPC,QSPC)
- REGION: geographical coverage of the product
- [**validity_datetime** minus **publication_datetime**] is represented as hhhmm, where h is the number of hours and m is the number of minutes. For example, 03600 means there are 36 hours between the **publication_datetime** and the **validity_datetime**.

Examples:

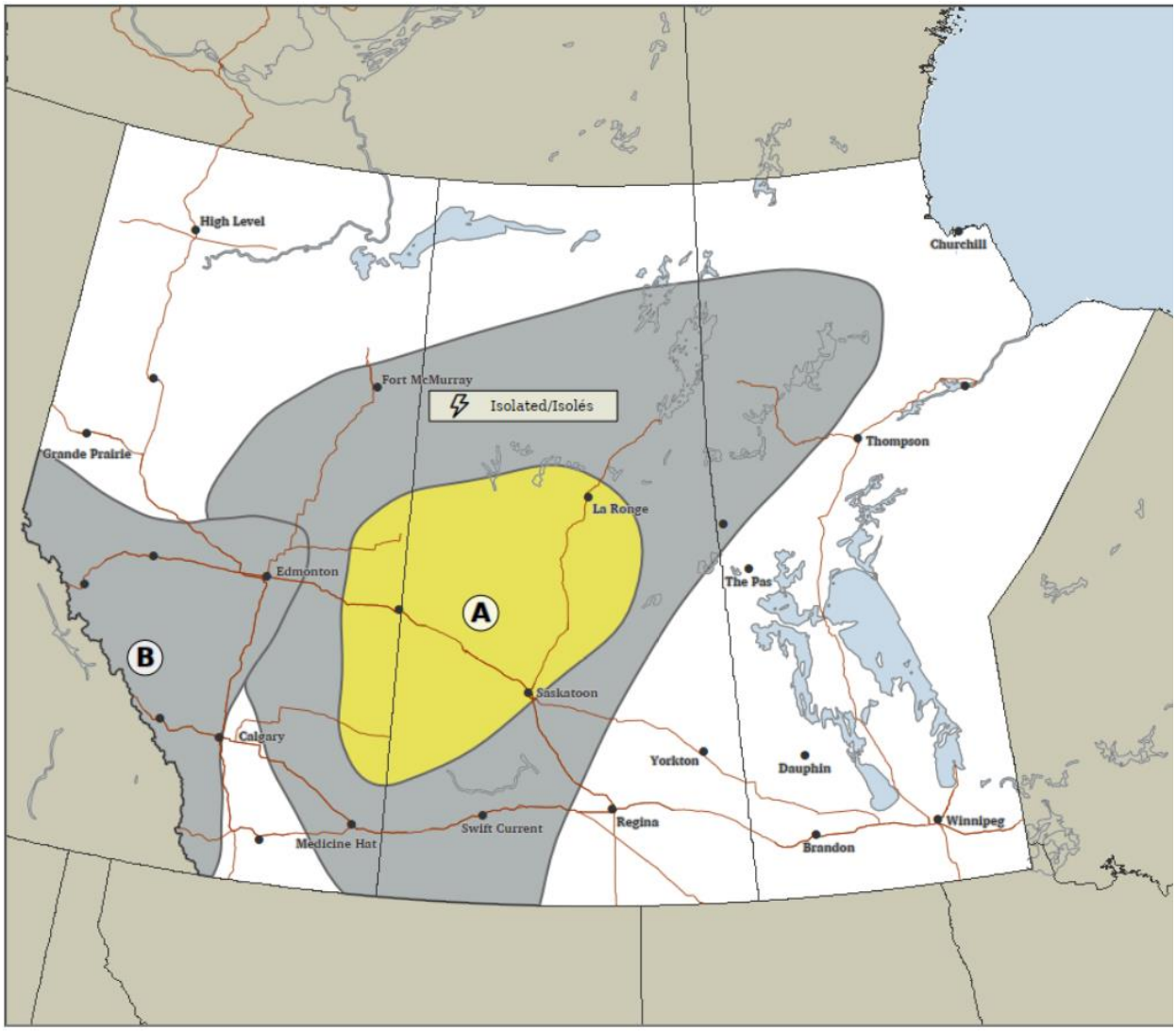
- Thunderstorm-QSPC-QC-202208241200-03600-cor_v0.png
- Thunderstorm-PASPC-PRAIRIES-202208241200-02400-cor_v1.png

Content of Files (Graphical Product)

The graphical product of the Thunderstorm Outlook is a raster image showing the geographical area, as exampled below.

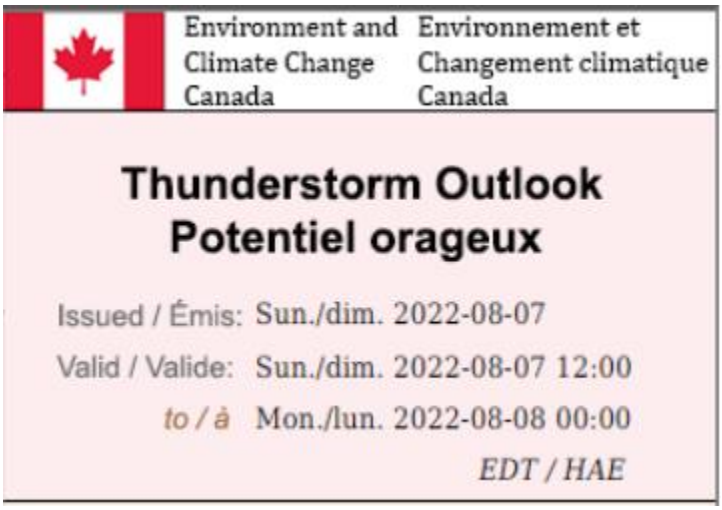


Map Portion



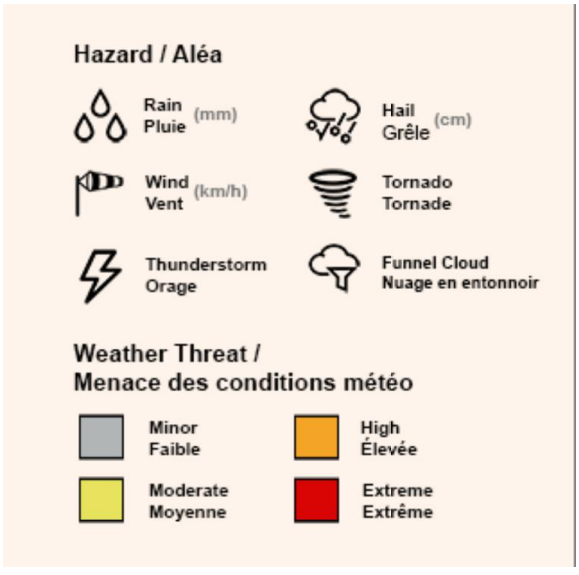
- The geographical coverage of the image is based on **REGION**. This coverage area is coloured white, as opposed to areas outside of the coverage area, which is coloured green.
- Each polygon/multi-polygon corresponds to a Feature and its information.
- The polygon colour matches the **severity** as defined in the legend.
- If multiple polygons occupy the same space, the polygon with the highest severity has the dominant weather condition in the area.
- The forecaster can choose whether to put the hazard information directly on the map or indexed to the “Area / Région” section, depending on how clustered the map looks.

Title and time information



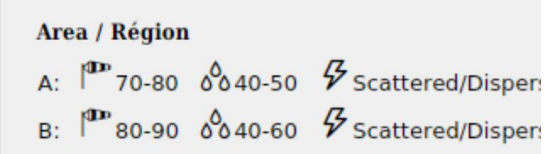
- "Issued / Émis: " & **publication_datetime**
  - Datetime format is "[day of week abbreviation EN]/[day of week abbreviation FR] [year]-[month]-[day]"
- "Valid / Valide: " & [start time of the forecaster chosen time period]
  - Datetime format is "[day of week abbreviation EN]/[day of week abbreviation FR] [year]-[month]-[day] [time]"
- "to / à " & **validity_datetime**
  - Datetime format is "[day of week abbreviation EN]/[day of week abbreviation FR] [year]-[month]-[day] [time]"
- Timezone – local time zone. For coverage areas with multiple time zones, a default time zone is set (i.e. Mountain time for Prairies).

Legend



- Hazard / Aléa contains the hazard icon, hazard name, and unit if applicable. For hazards with units, the units are preconfigured to be the same all the time.
- Weather Threat / Menace des conditions météo
    - Minor / Faible – Grey
    - Moderate / Moyenne – Yellow
    - High / Élevée – Orange
    - Extreme / Extrême – Red

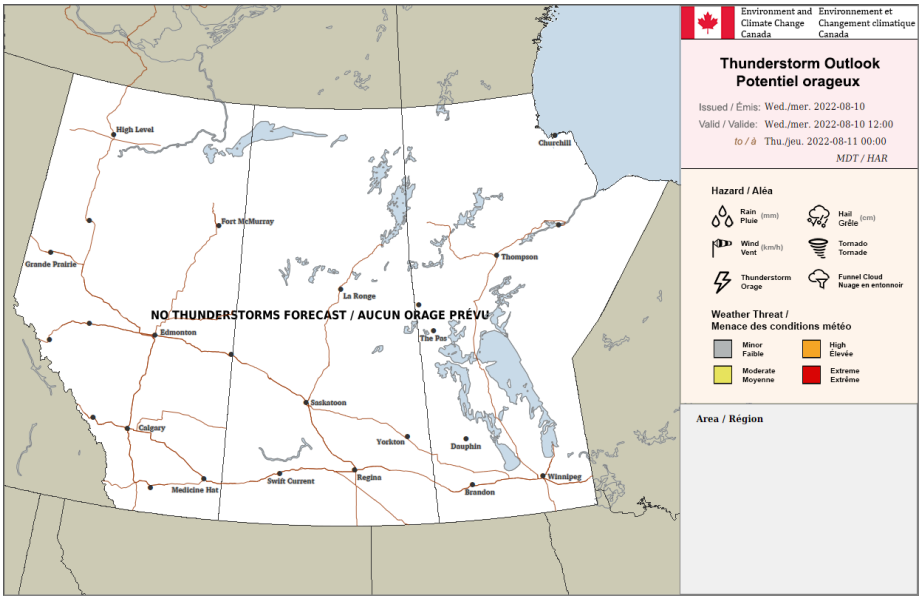
Area / Région Section



- Each letter in this section is indexed to a polygon and displays its hazard information.
- The hazards appear in a preconfigured order: wind gust>hail>rain>tornado>thunderstorm.
- If a hazard exists for a polygon, the following information will be displayed
    - Hazard icon
    - Hazard value(s) (for **gust**, **hail**, **rain**, **thunderstorm**, or **tornado**)
- If a funnel cloud area exists, a funnel cloud icon will be displayed (Note that funnel cloud areas do not contain weather hazard attributes.):

Other information

- A Thunderstorm Outlook with no features may be handled differently depending on the regions' standards of procedure. Some regions will indicate there are no thunderstorms forecast on the graphical product with no polygons while other regions will not publish the product.



Support

If you have any questions about this data, please contact us using [Contact Us - Environment Canada (weather.gc.ca)]