Rationale for the development of "Core Wildfire Season" for use in the 90th Percentile Calculator

During development of the 90th Percentile Calculator for the Canadian Forest Fire Weather Index system (CFFWIS or FWI system), a 'core wildfire season' concept was used to assign dates for each weather station in a geographical climatic area. These dates establish the beginning and end of the core wildfire season. Only weather data recorded during this time every year is used calculate the 90th percentile for each weather station. The core wildfire season was developed using the following concepts:

- Each weather station was associated with a geographical climatic area, using Eco-Divisions (below).
- An evaluation of weather stations in each Eco-Division was undertaken using the criteria outlined below. Average values for each Eco-Division were used to establish the length of the core wildfire season.
- Core wildfire season starting values were set using the criteria: *"When do wildfire starts begin each year in terms of requiring suppression action?"*. The following conditions were used in setting this value:
    - Average Build Up Index
    - Hours of daylight
    - Average climatic conditions
- Core wildfire season end values were set using the criteria: *"When do wildfire starts become less active in terms of fire behaviour and length of burning period?"*. The following criteria was used to set this value:
    - Hours of daylight
    - Average climatic conditions
- Historical wildfire starts were also used as a factor, although wildfire starts cannot be used confidently to assess wildfire start potential in the shoulder season.

Eco-divisions of British Columbia were chosen as the most suitable geoclimatic boundary for this evaluation. The following diagram shows the Eco-Divisions for BC:

Using the above criteria, the core wildfire season was set for each Eco-division:

Eco-division	Core Wildfire Season
Sub-Artic Highlands	June 1st to August 15th
Sub Artic	June 1st to August 15th
Boreal	May 15th to August 31st
Humid Continental Highlands	May 15th to August 31st
Humid Maritime and Highlands	May 15th to August 31st
Semi-Arid Steppe Highlands	May 1st to September 15th
Sub Arctic Pacific	June 1st to August 15th