SOIL CLIMATE

SOIL TEMPERATURE CLASSES

- ARCTIC - extremely cold
- SUBARCTIC - very cold
- COLD CRYOPHOREAL
- MODERATELY COLD CRYOPHOREAL
- COOL BOREAL
- MODERATELY COOL BOREAL
- MILD BOREAL

See text for a description of soil temperature instead of North America.

THE SOIL CLIMATES OF CANADA

Many classification systems of climate emphasize the aerial biomes and are based on
an indirect determination of air temperatures and precipitation distributions together with the
frequencies of variable weather conditions. These factors do not account for the climate of the
soil. The total plant environment, in which interaction takes place between the aerial climate
and the substrate, is not easily measured by habitable growth. A given soil may support
biomes that are native to more than one climate class. The total number of species that
flourish in a single soil type may vary depending on the soil's moisture and temperature.

SOIL TEMPERATURE CLASSES

1. ARCTIC
2. SUBARCTIC
3. COLD CRYOPHOREAL
4. MODERATELY COLD CRYOPHOREAL
5. COOL BOREAL
6. MODERATELY COOL BOREAL
7. MILD BOREAL

SOIL MOISTURE REGIONS AND SUBCLASSES

AQUIC REGIME
- Subaqueous - saturated for most of the year
- Subaqueous - saturated for less than 100 days
- Subaqueous - saturated for less than 5 days
- Subaqueous - saturated for less than 1 day
- Subaqueous - saturated for less than 1 hour
- Subaqueous - saturated for less than 1 minute

PERMAMOIST - no significant water deficit
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SOIL CLIMATE

DEFINITIONS

MEAN ANNUAL SOIL TEMPERATURE

- Mean annual soil temperature is calculated for the 36 months of the year at a depth
of 30 cm.

MEAN SUMMER SOIL TEMPERATURE

- Mean summer soil temperature is calculated for the 36 months of the year at a depth
of 30 cm.

PERMAMOIST

- Water deficit is less than 100
- Water deficit is less than 10
- Water deficit is less than 1
- Water deficit is less than 1
- Water deficit is less than 1
- Water deficit is less than 1

WATER REPLENISHMENT

- Water replenishment is calculated for the 36 months of the year at a depth
of 30 cm.

CLIMATIC MOISTURE INDEX

- Climate moisture index is calculated for the 36 months of the year at a depth
of 30 cm.

TEMPERATURE CONDITION SCALE

- Cold: -40°C to -20°C
- Moderately Cold: -20°C to 0°C
- Cool: 0°C to 10°C
- Moderately Warm: 10°C to 20°C
- Warm: 20°C to 30°C
- Hot: 30°C to 40°C
- Extremely Hot: 40°C to 50°C

Climatic conditions are in a state of equilibrium in the soil.