

ELECTRONIC SUPPLEMENTARY INFORMATION

Table 1. The types of primary fire carriers (PFC)

PFC type, its code	Typical areas, their attributes	Non-typical areas, their attributes	Critical class of dryness (CCD)
Moss PFC Subgroup			
Lichen (Lc)	1. Lichens predominate in the forest floor 2. Lichens are present in the forest floor on dry soil	Very dry, including rock outcrops, with litter of pine needles	I
Dry moss (Dm)	Forest floor is predominately covered with green mosses, somewhere with lichens, on drained soil in boreal and northern forests (green-moss and cranberry-green-moss forest types)	-	II
Moist moss (Mm)	Forest floor is predominately covered with green mosses, on insufficiently drained soil (forest types are mossy, <i>Aulacomnium</i> , moist billberry and similar)	In southern taiga on drained soil, the forest floor may be predominated by green mosses. Thin cover (up to 3 cm) of compact moss	III
Bog-moss (Bm)	Ground cover is predominated by Sphagnum and Hypnum moss species, on boggy and bog soils (without notable presence of sedge or grass)	-	
Subtype Bm ₁	Boggy forests and small bogs amidst drained plains, with peat layer up to 0.7 m thick	Ground cover is predominated by <i>Polytrichum</i>	IV
Subtype Bm ₂	Large bogs and bog systems		Non-ignitable
Litter PFC Subgroup			
Cured grass (Cg)	Forest floor is predominated by dry grass or sedge (i.e. naturally cured plants), usually in fall and spring. Not included are sedge forest types with ground cover of evergreen sedge	Bogs and swamps of sedge-sphagnum and sedge-hypnum types, with well-developed cover of sedge in spring and fall (in summer - Bm)	I
Loose litter (LI)	1. Forest floor is predominated by herbs - in spring and fall. 2. Forest floor is predominated by litter of birch and aspen fallen leaves 3. Forest floor is predominated by litter of pine and cedar fallen needles	1. Forest floor is predominated by evergreen sedge - in spring and fall 2. Matted litter of dry sedge or grass	II
Compact litter (CI)	1. Forest floor is predominated by compact litter of fallen needles of fir, spruce or larch – in all seasons 2. Forest floor is predominated by compact litter of fallen leaves of birch or aspen, and by matted dry herbs	-	III
Non-fire-carrier (Nc)	Surface fuel cover is too scarce for fire to spread	-	
Subtype Nc ₁	Fuels not providing spread of surface fire: duff, humus, turf; usually in summer. Ground fires are possible	Live grass load exceeds PFC load in summer, so spread of surface fire is impossible	IV
Subtype Nc ₂	Absence or very scarce presence of any PFC; sands, pebble, rock outcrops, plowed fields, roads, etc.	-	Non-ignitable

Comments: *Critical class of dryness (CCD) means the lowest class of dryness which provides the burning ability of a particular PFC in typical environment conditions (gentle topography, forest stand of relative basal area of 0.5-0.7, with live leafing). Dryness class is rated according to the fire weather danger index (or the Nesterov index, or the PV-1 index), points: I DC - up to 300, II DC - 301-1000, III DC - 1001-3000, IV D - 3001-10,000, V DC - over 10,000 points of the fire weather danger index. ** PFC for the litter subgroup is identified separately for summer and spring (fall).