

$$T_s = T_a(t)$$

$$T_s = 2^\circ\text{C}$$

Frozen soil

Mushy region

Unfrozen soil

$$B=0$$

$$0 < B < 1$$

$$B=1$$

Initial temperature profile

Depth and time dependent temperature

Geothermal gradient: 0.03

$T=WFT$

