Without question, firefighting is a dangerous occupation. Each year in the U.S., over 100 firefighters die in the line of duty and over 80,000 are injured. These numbers have not improved during the past 25 years and, in fact, have been trending upward for the past decade. Firefighter professional associations and advocacy groups have increasingly called for changes to the safety culture/climate of firefighting, but to date there has been little empirical research. Of central concern is the view that firefighters often take unwarranted risks and routinely accept very thin margins of safety. This presentation outlines a conceptual model of safety climate specific to firefighting. The proposed model is derived from general industry research on organisational and safety climate, with specific reference to high hazard industries and high reliability organisations. The model also takes into consideration how firefighting is organised in terms of command system and operational tactics, as well as how firefighters are trained, socialised and assimilated at the organisational and unit levels. The model itself proposes a hierarchical structure for safety climate that includes dimensions representing task, work role, group and organisational influences. The model hypothesizes that safety climate mediates the relationship between the dimensions of climate and safety-related behaviour. The model is logically structured in terms of a climate behaviour outcome (eg, injury).