

## 33. Flashover / Backdraft AND Managing Risks

**Flashover/Backdraft** This program will review the fire science surrounding energy, forms of ignition, and modes of combustion, discuss the impact of thermal energy on heat, temperature, and heat transfer, review the physical states of fuel, discuss the relationship between oxygen and life safety, identify the products of self-sustained chemical reactions, recognize signs, causes, and effects of rapid-fire development specifically discussing BLEVE, smoke explosions, flashovers, and backdrafts. Finally, this program will look at protective clothing and its limitations as defenses against these threats.

**Managing Risks** This program will define the issues and factors that the leadership of an organization uses to manage risk both in the station, in public and on the scene of an incident. The program will look to develop an understanding of personal influence and how traits, values and tradition affect risk. This program will help develop strategies for risk assessment and develop tools to manage risk in all aspects of the fire service.

### Instructor

**Mike Prete** retired after 37 years of active service as an Assistant Fire Chief at Montgomery County (MD) Fire and Rescue Services, a large combination department near our nation's capital. With over 40 years of fire and rescue experience, Mike started as a volunteer in a department that bordered Washington DC and served in a career capacity for Montgomery County holding positions from Firefighter Paramedic through Executive Operations Chief. In addition to his role directly relating to fire and rescue operations, he managed daily operational and administrative issues including budget, daily oversight and scheduling for 1300 full time personnel. Mike began teaching in his early days as a sergeant, serving as a recruit instructor, and has continued this passion today. With national and state instructor certifications, Mike has served as an adjunct instructor for the Maryland Fire and Rescue Institute, NIMS Instructor for MEMA, Anne Arundel Community College adjunct instructor, Practical Incident Control Training lead instructor and holds various certifications in public safety. Since his retirement, Mike splits his time between teaching and as a project coordinator for the National Fallen Firefighters Foundation (NFFF). Mike hosts the NFFF Podcast series Firefighter After Action Review which takes deep dives into Line of Duty Death incidents by discussing all aspects of these incidents with personnel who have knowledge of these tragic events.