



# QUICK RESPONSE

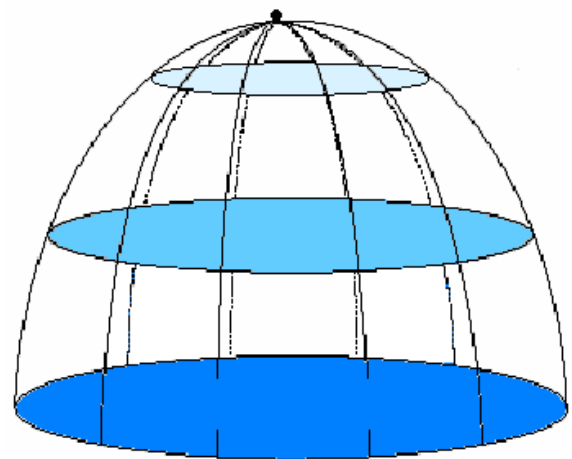
*Saving life and property through effective licensing, plan review,  
and inspection of fire protection systems.*

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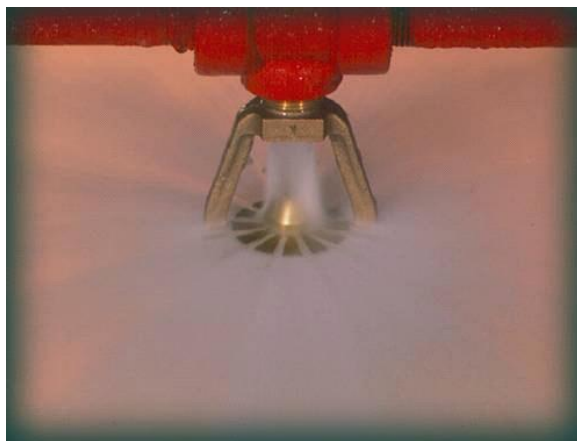
## SPRINKLER DISCHARGE PATTERNS – ESFR SPRINKLERS

Standard spray sprinklers operate on the concept of fire control. They are to provide sufficient discharge so that a fire does not spread beyond the system design area. However, **Early Suppression Fast Response (ESFR)** sprinklers are designed to provide adequate discharge to suppress a fire.

Although the **discharge pattern** of an **ESFR** sprinkler is similar in shape to the standard spray sprinklers (Fig.1), the water droplet within the discharge pattern is different. Water droplets from an **ESFR** sprinkler are larger, allowing them to penetrate the fire plume, reach the fire and achieve fire suppression.



**Fig. 1 Standard spray sprinkler discharge pattern**



**Early Suppression Fast Response (ESFR) sprinkler**

Due to the concept of suppression versus control, the **discharge pattern** of **Early Suppression Fast Response** sprinklers is more affected by obstructions. Careful consideration of obstructions is vital to assure sprinkler discharge can reach the seat of a fire.