

## FREQUENTLY ASKED QUESTIONS ABOUT SMOKE ALARMS

• **Where should I put a smoke alarm?** ○ In every bedroom and in main hallways on each floor

• **When should I change the battery?** ○ Every six months if using standard alkaline batteries

• **What are the two types of smoke alarms?**

○ The two types of smoke alarms are ionization and photoelectric

1. **Ionization** smoke detection is generally more responsive to flaming fires: Ionization-type smoke alarms have a small amount of radioactive material between two electrically charged plates, which ionize's the air and causes current to flow between the plates. When smoke enters the chamber, it disrupts the flow of ions, thus reducing the flow of current and activating the alarm.

2. **Photoelectric** smoke detection is generally more responsive to fires that begin with a long period of smoldering (called "smoldering fires"). Photoelectric-type alarms aim a light source into a sensing chamber at an angle away from the sensor. Smoke enters the chamber, reflecting light onto the light sensor; triggering the alarm.

For each type of smoke alarm, the advantage it provides may be critical to life safety in some fire situations. Home fatal fires, day or night, include a large number of smoldering fires and a large number of flaming fires. One cannot predict the type of fire you may have in your home or when it will occur. Any smoke alarm technology, to be acceptable, must perform acceptably for both types of fires in order to provide early warning of fire at all times of the day or night and whether you are asleep or awake.

For best protection, it is recommended both (ionization and photoelectric) technologies be in homes. In addition to individual ionization and photoelectric alarms, combination alarms that include both technologies in a single device are available.

If you should have any additional questions regarding this issue, please do not hesitate to call the Berkeley Fire Department's Fire Prevention Division at (510) 981-5585.