THE DANGER OF CARBON MONOXIDE

Carbon monoxide is a colorless, odorless, tasteless, highly-toxic gas that is produced by incomplete combustion. It is important to know that carbon monoxide is deadly from the toxicity standpoint long before it reaches the combustible range. It comes from appliances that consume coal, oil, wood, propane gas, natural gas, and other hydrocarbon-based fuels. It is absorbed by the hemoglobin of the blood cells and replaces the oxygen of the red blood cells that your body needs. When carbon monoxide replaces enough oxygen, your body begins to suffocate from the inside out and may cause brain damage, coma, or later, death.

The carbon monoxide concentrations and the effects from the concentrations vary from different levels of carbon monoxide and the exposure time. If you feel you have carbon monoxide in your building, you may call your local plumber or the Emmetsburg Municipal Utilities office to test your home for carbon monoxide. Effects can vary significantly based on age, weight and overall state of health.

Concentrations	**Effects**
9 parts per million	The maximum allowable concentration for short-term exposure in a living area according to the American Society of Heating, Refrigeration and Air Conditioning Engineers.
35 parts per million	The maximum allowable concentration for continuous exposure in any 8-hour period, according to federal law.
200 parts per million	Slight headache, tiredness, dizziness, nausea after 2-3 hours.
400 parts per million	Frontal headaches within 1-2 hours, life threatening after 3 hours, also maximum parts per million in flue gas, according to EPA and American Gas Association.
800 parts per million	Dizziness, nausea and convulsions within 45 minutes. Unconsciousness within 2 hours, death within 2-3 hours.
1,600 parts per million	Headache, dizziness and nausea within 20 minutes, death within 1 hour.
3,200 parts per million	Headache, dizziness and nausea within 5-10 minutes, death within 30 minutes.
6,400 parts per million	Headache, dizziness and nausea within 1-2 minutes, death within 10-15 minutes.
12,800 parts per million	Death within 1-3 minutes.

ARE CARBON MONOXIDE DETECTORS NECESSARY? YES, THEY ARE!

Carbon Monoxide detectors measure the amount of CO gas that has accumulated. Current CO detectors sound an alarm when the concentration of CO in the air is equal to or above 10% carboxyhemoglobin level in the blood. 10% carboxyhemoglobin is the lowest level of CO poisoning. This sensitivity may cause the alarm to sound before any symptoms appear. It is important to treat all alarms as serious and have the cause determined to be sure your home is safe. When buying a CO detector, buy only units that have been tested by qualified testing laboratories. Follow the manufacturer's instructions for installation and use of your CO detector in your home. Test your CO detector once a month along with your smoke detectors. Replace your CO detector every two years, or as recommended by the manufacturer. Plan and practice a home evacuation plan with all members of the family in case of any emergency.

WHAT SHOULD I DO IF MY CARBON MONOXIDE DETECTOR ALARM GOES OFF?

- Make sure no one is experiencing any signs of CO poisoning.
- If Symptoms of CO poisoning are present, everyone should exit the building, leaving the doors open as you go.
- GET IMMEDIATE MEDICAL HELP!
- Use a cellphone or neighbor's telephone to report the alarm and follow the instructions you are given.
- If symptoms of CO poisoning are not present, open windows and doors, shut down heating and cooking equipment.
- Call a qualified technician to inspect and service your equipment.
- Be on the lookout for symptoms of CO poisoning.