DISTINGUISHED.
PROGRAMS

MANAGING RISK:
GRILL AND FIRE PIT SAFETY

Features such as fire pits and grills are a popular amenity in many types of occupancies. They can be found in patio settings and even on Rooftops. This Risk Topic will discuss common exposures and possible controls to help mitigate property and liability losses.

INTRODUCTION TO GRILL SAFETY

Summer and barbecues go hand in hand but accidents do happen. According to the U.S. Fire Administration, about 5,700 grill fires take place every year, many caused by malfunctioning gas grills. These fires cause an annual average of $37 million in damage, 100 injuries and 10 fatalities. In addition, thousands more people visit emergency rooms every year because they have burned themselves while barbecuing. Following are several key safety tips to ensure trouble-free summer cooking.

GUIDANCE

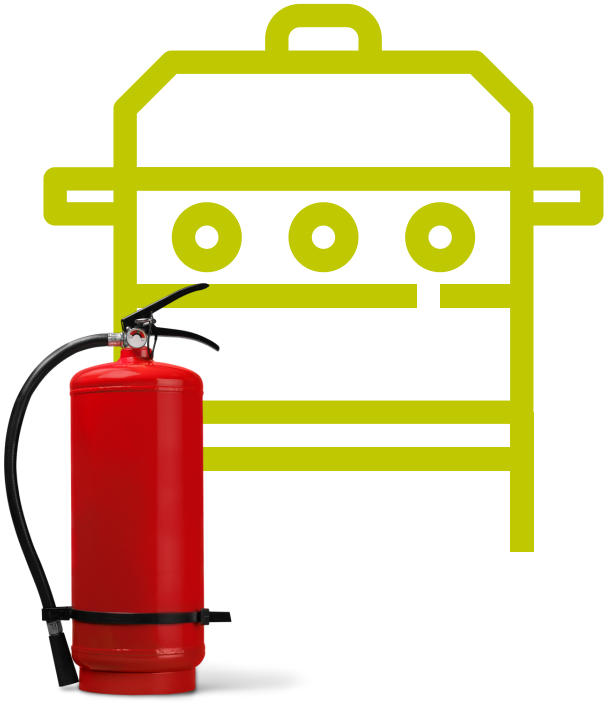
Grill Maintenance

- Grill hoses should be examined for cracks, holes and brittleness.
- Look for blockages caused by food drippings, spiders or insects and clear them with a wire or pipe cleaner.
- Run a soap solution (one part liquid soap, one part water) along hoses and at connections, then open the tank valve and make sure that gas isn't escaping, which will be indicated by bubbles at the leaking points.
- Adjust hoses as needed away from hot areas or where grease might drip on them.
- Store propane tanks outside, away from property. Always check to make sure valves are firmly turned off.

Barbecue Practices

- Ensure proper operation of the barbecue by reading the manual carefully.
- The barbecue should be placed on a level surface – away from the structure and landscaping. Every year hundreds of people cause fires to their properties because they didn't put their grill or smoker in the correct location.
- The grill should only be used outside and kept at least 3 feet from siding and eaves.
- Grills should not be stored on decking or fire escapes.

- The grill should not be moved once it is lit.
- A 3-foot safe zone should exist around your grill, which should keep kids and pets safe.
- The grill and tray below the grill should be cleaned after each use. This will remove grease that can start a fire.
- Ensure the right clothing is worn. Shirttails, sleeves, apron strings should not dangle so they don't catch fire.
- Take note: Charcoal grills are the cause of far more fires than gas grills. For charcoal grills:
  - Only lighter fluid designed for grilling should be used.
  - Gasoline or other flammable liquids should never be used
  - Never add more lighter fluid once the fire has started.
- A fire extinguisher should be kept nearby.
- Once cooking is done, the grill will remain hot for a while so care must be taken.
- Don't cover or store the grill until it has cooled, and soak coals with water before throwing them away.
- Place the coals from the grill in a metal can with a lid once they have cooled.



In the Event of An Accident

- Put out the fire with baking soda to control a grease fire and have a fire extinguisher nearby for other fires. If there is no fire extinguisher, bucket of sand should be kept next to the grill. Never use water to put out grease fire.
- In the event of an injury, run cool water over minor burns, but do not cover injured areas with bandages, butter or salve.
- In the case of more serious burns, the victim should be taken to the ER immediately. If needed or when in doubt, call 911

DISTINGUISHED PROGRAMS INSPECTION REQUIREMENTS FOR GRILLS*

- Prohibit use of gas or charcoal grills on wood decks and balconies or within 10 feet of combustible material or construction.
- Under National Fire Protection Association, safety requirement prohibits the use of hibachi, grill, or such devices whether for cooking, heating or others uses to be used or kindled on any balcony, below an overhand with within 10 ft of a structure.
- Immediately remove rooftop grill and forward a letter to all tenants directing them that using a BBQ on building roof tops is prohibited by NYC Building codes.

*Exception to one- or two-story family homes

INTRODUCTION TO FIRE PIT SAFETY

Gas fire pits are a popular feature in a multitude of occupancies today and are used for a variety of purposes including providing a gathering spot for people to socialize, a source of seasonal radiant heat, and even a cooking medium for camp fire type snacks.

There are many things property owners should consider before setting up and using a fire pit to ensure their property, residents and visitors remain safe. Concerns arise from several areas including installation considerations, device location, fuel source considerations, use and misuse potential.

Due to the varied sizes, types, and installation configuration, standards revolve around the components versus the entire assembly.

Here are some common specification variables for many fire pit type installations:

- Most units are natural gas or propane fired with the propane tank(s) being integral to the assembly.
- Size of LP Gas tank is dependent on the BTU capacity of the unit.
- Up to 65,000 btu units can use manual ignition. This is not recommended. Auto ignition with a flame or ignition failure shutoff is preferred. It should be noted, the larger the btu, the larger the flame.
- Some units will use a bed of pebbles, glass beads, other glass shapes, or lava rocks as part of the bed. These are usually at least 2” deep. Materials should be designed for the type of table used.
- Units can be arranged to provide for cooking of “camp fire” food such as marshmallows or even hot dogs.
- Glass barriers can be arranged to prevent coming in contact with flames.

GUIDANCE

Specifying/Obtaining a unit
Determine the fuel source to be used and ability to deliver fuel to planned location of the unit. Units should meet the following standards: CSA 2.41-2014/ANSI Z21.97-2017 and NFPA 54 National Fuel Gas Code. If the unit has glass stones or other features, they should be specified for the particular unit.

Placing the unit

- Units should be placed on a flat, solid, level surface. If combustible material is under the unit, it should be removed or covered with non-combustible material.
- Ample clearance should be provided to prevent nearby combustibles from igniting or pyrolizing. This should be at least three feet or per manufacturer's instructions.
- If furniture is located close to the unit, it should be fixed so it can't be placed to close and provide a burn hazard or ignition source.
- In the unit under a sprinklered canopy, it should be no less than six feet away from the sprinklers or as manufacturer recommends.

Fueling the unit

- Most units are LP gas-fired with the size of the fuel tanks related to the BTU rating of the unit itself. The tanks are usually integral to the fire pit assembly generally stored away for aesthetic purposes. LP gas units should not be used on rooftop units. Wood or pellet fired units should not be used.

Plumbing the unit

- Plumbing for the unit should meet NFPA 54 requirements of a rigid line or other line rated for this use. Aluminum alloy piping should not be used in exterior installations. Connections should be protected from thermal exposure and physical damage.
- Excess flow valves should be installed when possible. Electronic ignition should be installed. Flame failure sensors that shut fuel train off when loss of ignition occurs should be installed. Electronic ignition is greatly preferred and control switches should be secured so only staff can energize system.
- An emergency shutoff should be placed in the fuel train.
- Piping should be installed in a manner to prevent it from being struck or becoming a trip hazard.

Accessories

- If glass walls are installed to protect unit, ensure glass is appropriate for heat it will be exposed to. Sharp edges should be trimmed.
- Covers should be available to place on the units to protect the burners when not in use. They should be designed for the use.
- If the unit is located near enough to an interior space such as a patio or overhang, consideration should be given to the installation of carbon monoxide and combustible gas detection.
- If the unit is idled for the winter, it should be covered and prior to next season use, have the burner assemblies inspected for corrosion and blockage. Fuel lines should be shut off and bled off.
- Signage should be posted advising children to be supervised around table; not to throw objects onto the fire pit; not to cook on table (unless designed for that purpose) and not to adjust or alter flame.
- Signage should also be placed for staff advising on the do's and don'ts with the units as well as weather conditions it should not be operated in (high winds, rain, thunderstorms).