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| July 1, 2017  | <b>SANTA ROSA FIRE DEPARTMENT<br/>FIRE PREVENTION BUREAU STANDARD</b> |
|  | <b>PROPANE USE FOR OUTSIDE PUBLIC ASSEMBLIES</b>                      |

**PURPOSE:** This checklist is a summary of Fire Department interpretations of City and State Codes, and Industrial Standards. Information contained herein applies to typical instances and may not address all circumstances.

This bulletin is intended for those who desire to use propane for cooking, cooling, heating, lighting, etc., in special, public assembly events out-of-doors.

**CODE REFERENCES**

Current Edition - California Fire Code (CFC) Chapter 50, Chapter 53 and Chapter 61  
National Fire Protection Association (NFPA) Chapter 58  
Santa Rosa City Code 18-44

**PERMIT APPLICATION**

A Fire Code Operational Permit/Special Event Permit is required for events where 50 or more people will be in attendance (Places of Assembly). A Fire Code Operational Permit is also required to operate an air supported temporary membrane structure or a tent having an area in excess of 400 square feet or a tent open on all sides having an area in excess of 700 square feet (Temporary Membrane Structures and Tents).

Approval to use propane at outdoor special events or in combination with a tent shall be obtained from the Fire Authority having jurisdiction prior to the use or event. Some Fire Agencies may require a separate operational permit for propane use in addition to the noted operational permits for outdoor public assemblies and temporary membrane structures and tents.

Where propane is used at a place of assembly (i.e. special event) or in combination with a tent, specific information regarding the type of operation to be conducted as well as a site map and booth layout shall be included with any permit application.

**EQUIPMENT**

Propane storage tanks, regulators, piping, valves, fittings, burners, and associated equipment shall be approved for use as per the following standards:

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- NFPA** - **National Fire Protection Association**
- DOT** - **Department Of Transportation**
- UL** - **Underwriters Laboratory**
- ANSI** - **American National Standards Institute**
- AGA** - **American Gas Institute**  
or other Nationally Recognized Standard (NFPA 54)

## CONSUMER PROPANE CYLINDER DIMENSIONS

The dimensions presented below are approximate measurements of common size propane cylinders found in service today. The measurements are not exact so contact your propane company or container manufacturer for precise cylinder dimensions.

|                  | <b>“5 Gal”</b> | <b>“7 Gal”</b> | <b>“10 Gal”</b> | <b>“25 Gal”</b> |
|------------------|----------------|----------------|-----------------|-----------------|
| Water Capacity   |                |                |                 |                 |
| Propane Capacity | 4.5 gal        | 6.5 gal        | 9.5 gal         | 22.5 gal        |
| Weight (empty)   | 18 lbs         | 24 lbs         | 29 lbs          | 68 lbs          |
| Weight (full)    | 38 lbs         | 54 lbs         | 70 lbs          | 170 lbs         |
| Overall Height   | 18 in.         | 24 in.         | 29 in.          | 48 in.          |
| Diameter         | 12.5 in.       | 12.5 in.       | 12.5 in.        | 14.5 in.        |
| BTU Capacity     | 430,270        | 649,980        | 860,542         | 2,160,509       |

## PROPANE CYLINDER BTU CAPACITIES

Propane cylinder BTU capacity indicates the total number of BTU's per full cylinder. This information is useful when determining the total appliance running time. Naturally, larger propane cylinders will allow for longer running times but sometimes larger cylinders are not practical for use in certain applications due to space, hose length, etc. To calculate the total propane bottle supply time, divide the total BTU's of the cylinder by the appliance BTU rating. Keep in mind that listed BTU appliance ratings indicate the total BTU load when the appliance is running at 100%. In other words, a gas grill with a listed rating of 50,000 BTU implies the grill will use 50,000 BTU's per hour when all burners are turned on running at capacity.

## APPLICATION

An application for propane use for outside public assemblies shall include the following:

1. Name, address and phone number of applicant, and name, address and phone number of contact person if different from applicant.
2. Description of propane use: i.e., cooking (fryer, grill, etc.), heating, cooling, etc.
3. Site map, including the location of propane device(s) being used, location of extra cylinder storage, distance to adjacent buildings and any other propane being used at the same event.
4. Indicate date(s) and time(s) of use.
5. Total amount of propane needed for daily use (provide calculations indicating amount of gas per hour times the total hours per day).
6. Provide a description (drawing or picture) of device(s) used for event (manufacturer's specification sheets may be required).
7. Indicate type of enclosure, canopy or other booth assembly.
8. Submitted no less than two (2) business days before event or fees may be doubled.

## APPROVED USE

A limited use propane permit for use at a special event will be issued upon completion of the application and when the following conditions for propane use are met. Limited Use Propane permits are broken out into three (3) Groups and are listed below:

1. Group 1: Booth or Tent Setting – three options.
  - a. Four 5 gallon propane tanks with two in use and two in reserve.
  - b. Three 7 gallon propane tanks with two in use and one in reserve.
  - c. Two 10 gallon propane tanks with one in use and one in reserve.
    1. Cooking booths shall be separated by a minimum of 10 feet.
    2. All propane containers must be kept outside the enclosure at all times.
2. Group 2: Mobile Trailer.
  - a. Two 25 gallon tanks **“maximum”** mounted to the trailer and in use.
    1. Catering or cooking equipment that is permanently mounted to a vehicle or trailer may be required to have an approved fixed extinguishing system installed.
    2. Operator must be able to provide verification of current tank certification and supply line integrity.

3. Separation from other cooking operations and open flames is maintained at a minimum of 10 feet.
3. Group 3: Mobile Food Trucks
  - a. Unmodified tanks as designed for the mobile vehicle will be acceptable provided the following conditions are met.
    1. Operator must be able to provide verification of current tank certification and supply line integrity.
    2. Separation from other cooking operations and open flames is maintained at a minimum of 10 feet.
    3. Catering or cooking equipment that is permanently mounted to a vehicle or trailer will be required to have an approved fixed extinguishing system installed where cooking produces grease laden vapors.
4. A maximum of two (2) containers may be manifolded together at any one time. Excess flow valves will be required when tanks are manifolded. These should be located as close to or near discharge connection on the tank(s), but must be kept outside the booth, tent or enclosure at all times.
5. Other propane containers not in use (both empty and full) shall be stored away from open flame, out of public way and in close proximity of user's view and properly secured to prevent the tank from tipping or falling over. Five (5), seven (7) and 10 gallon tanks shall be nested in a milk crate for support.
6. All hoses or lines between the propane tank and the propane device must be placed in a manner as to avoid being a trip hazard. The lines must also be leak tested in the presence of the Fire Department with soapy water in a spray bottle. **The vendor shall supply the spray bottle with soapy water mix for leak testing of the lines.**
7. Provide a minimum of one (1) "2A:10BC," or larger rated fire extinguisher. The fire extinguisher shall display the State Fire Marshal's approved service tag (by an approved fire extinguisher service company) and be dated for current use. For new fire extinguishers without an approved service tag, the extinguisher manufacture date within one (1) year may be accepted in place of an approved service tag.
  - a. Vendors using electric or propane fueled fryers are required to have onsite a currently serviced Class "K" fire extinguisher in addition to the (1) "2A:10BC" fire extinguisher.
8. Storage of propane containers shall not be permitted in adjacent buildings, vehicles, enclosed structures etc.

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9. All propane operations shall be at least ten (10) feet from any other open flame, any other propane operation, or any building, and shall be at least ten (10) feet away from any below grade transformer units.
10. Tents in which cooking is performed shall be separated from other tents, temporary membrane structures and canopies, by a minimum of twenty (20) feet. All propane containers must be kept outside the enclosure at all times.
11. Portable heaters shall be equipped with an approved automatic device to shut off the flow of gas to the burner(s) and pilot, if used, in the event of flame extinguishment or combustion failure.
12. At least one approved manual shut off valve shall be provided on piping between propane container and unit fueled by propane.
13. Outdoor cooking that produces sparks or grease-laden vapors shall be at least ten (10) feet from any temporary membrane structure, tent or canopy.
14. All requested variations from any of these requirements must be submitted in writing with the permit application, to the Fire Department for review and approval. Any approved variation will be limited to a specific site and specific use as described on the permit.

## **APPROVAL**

An on site inspection of the user's operation by the Fire Department is required, and must be completed before any permission to operate is granted, and prior to any permit being issued. Permission to operate will depend upon the Fire Inspector's final approval of the operation and equipment being used. Some of the common problems encountered during the Fire Department's on-site inspection which can result in a permit not being issued are:

1. Propane tanks that are too large, or too many propane tanks.
  - a. Reference Approved Use Section - Item 1 above.
2. A fire extinguisher that is not currently certified, or that has a rating that is too small.
  - a. Reference Approved Use Section - Item 7 above.
3. Propane tank stored or used inside the booth or tent.
  - a. Reference Approved Use Section - Item 1 and Item 2 above.
4. Propane operation placed too close to another hazard.

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- a. Reference Approved Use Section - Item 9 above.
5. Propane tanks are not secured or not kept upright.
    - a. Reference Approved Use Section - Item 5 above.
  6. For events which are greater than four (4) days in duration, and/or when the use of five (5) gallon, seven (7) gallon or 10 gallon containers is not practical, the request for the use of larger containers will be reviewed by the Fire Department, and may be approved on a case by case basis.

**Example Photographs of required items:**

2A:10BC – 5lb. Dry Chemical Fire Extinguisher – with current State Fire Marshal Service Tag. Required for all propane vendors.



Class “K” liquid agent Fire Extinguisher – with current State Fire Marshal Service Tag. Required for all vendors who are using cooking oils and fryers.



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Securing the propane tanks shall be accomplished by nesting in a milk crate for the 5, 7 and 10 gallon tanks. Also all supply lines shall have a regulator with no alterations and lines shall be soap tested to check integrity.

