

SANTA ROSA FIRE DEPARTMENT

FIRE PREVENTION BUREAU STANDARD

July 1, 2010



FIREWORKS PUBLIC DISPLAY

PURPOSE

The use, possession, sale, discharge, disposal, storage or use of all fireworks are prohibited within the City of Santa Rosa (SRCC 18-44.3808.3), unless specifically authorized by permit from the Fire Department. Fireworks are strictly regulated by the City due to the inherent danger to persons and property involved with the use of fireworks, including those described as "safe and sane". The Fire Department may issue a permit for a public display of fireworks provided that all of the following conditions are met.

CODE REFERENCES

Title 19 of the California Code of Regulations (CCR), Chapter 6 is the primary Code used as the authority with inspections and the corrective actions that are necessary. Other Codes that are referenced are the California Fire Code, as adopted by the City of Santa Rosa (Santa Rosa City Code - SRCC). These Codes are listed as "SRCC 18-44", followed by the particular code section. Other commonly used code references include the California Building Code (SRCC 18-16), the California Electrical Code (SRCC 18-32), and the California Vehicle Code (CVC).

REQUIRED PERMITS

- FIRE DEPARTMENT PERMIT FOR FIREWORKS PUBLIC DISPLAY** – SRCC 18-44-3308.3, H&S 12640(e), Title 19 CRR, Section 982 - A valid permit must be obtained prior to bringing any fireworks into the City of Santa Rosa. The permit must be kept on-site for review. A permit from the Fire Department will only be issued after the following has been verified:
 - Permit application must be submitted a minimum of 20 working days prior to the proposed event.
 - Permit fee has been paid to the Fire Department by the applicant.
 - The pyrotechnic operator has submitted an application to the Fire Department.
 - The name and organization sponsoring the display.
 - The names and license numbers of the persons actually in charge of the display.
 - The date and time of day the display is to be held.
 - The exact location planned for the display.
 - A detailed site plan has been provided by the pyrotechnic operator.
 - The pyrotechnic operator has provided Proof of Liability Insurance for the specific event.
 - The pyrotechnic operator has provided a valid Santa Rosa Business License.
 - A detailed list of all of the fireworks to be used has been provided by the pyrotechnic operator.

SITE PLAN - The site plan must include the following details – Title 19 CCR, Section 982 -

- A detailed map of the area of the event, including the launch location, operator's location, spectator area(s), fall-out area, roads, trees, utility lines, and access/egress routes for the event.
- Location and type of event security, crowd and traffic control.
- An aerial photograph of the area of the event, showing distances from the launch and fallout area to all nearby structures. Fallout area must be based on 100' diameter per inch of shell size

REQUIRED INSPECTIONS

- FIRE DEPARTMENT PERMIT FOR FIREWORKS PUBLIC DISPLAY** – SRCC 18-44-3308.3, H&S 12640(e), Title 19 CRR, Section 982 - A valid permit must be on-site for review.
- PYROTECHNIC OPERATOR AND ASSISTANTS** – Title 19, CCR, Section 981(a) - Operator must have valid California State Fire Marshal Pyrotechnics Operator's License and a valid driver license in possession; name must match permit information. All assistants must provide valid photo identification. Record name and date of birth of operator and all assistants.
- VERIFY SITE PLAN** – Title 19 CCR, Section 982 - Approved site plan must be followed – verify that the site is set up to match the approved site plan. Any deviations, modifications or other changes to the approved site plan must be approved prior to the start of the display.
- SECURITY OF EVENT AREA** – Title 19 CCR, Section 982 -
 - Verify security of discharge area; must match approved site plan.
 - Verify security of display area; must match approved site plan.
 - Verify security of fallout area; must match approved site plan.
 - Verify traffic and crowd control in place as per approved site plan.
- TRANSPORTATION AND STORAGE**
 - Transportation – types of devices** – Title 19 CCR, Section 990(a) – Only fireworks and pyrotechnic devices classified by and bearing the Seal of Registration of the State Fire Marshal shall be transported within California.
 - Transportation – packaging** – Title 19 CCR, Section 990(b) – All fireworks and pyrotechnic devices being transported in this state, whether classified or unclassified, shall be packaged and transported in accordance with the Code of Federal Regulations, Title 49, Part 173, Subpart C, or with Health and Safety Code Sections 12650-12654.
 - Transportation – vehicles** – Title 19 CCR, Section 990.1 – Every vehicle transporting fireworks or pyrotechnic devices shall comply with sections 27903, 31610 and 31616 of the California Vehicle Code.
 - Storage Location and Access** – Title 19 CCR, Section 989.1 – Storage sites must have access roads suitable for use by fire apparatus and be posted with an approved warning sign. The sign shall be weather-resistant with a reflective surface and lettering at least 2 inches high.

DANGER
NEVER FIGHT EXPLOSIVE FIRES
EXPLOSIVES ARE STORED ON THIS SITE
CALL _____

- Storage Security** – Title 19 CCR, Section 989(a) - Container(s) used to store fireworks must be locked and secured.

- PERSONNEL SAFETY and TRAINING** - Title 19 CCR, Section 991.2 – The employer or permittee shall be responsible for instructing his or her personnel who handle fireworks, pyrotechnic compositions or devices in any capacity, in the hazards and safety procedures relating to fireworks and pyrotechnic compositions or devices.

- FIRE PROTECTION AND SAFETY EQUIPMENT**
 - Fire extinguisher** - Title 19 CCR, Section 1004(a) – A serviceable pressurized water fire extinguisher available and accessible.
 - Tools** – Title 19 CCR, Section 1004(a) - Shovel and container available for retrieving duds.
 - Protective clothing** – Title 19 CCR, Section 1004(b) - Appropriate protective gear (i.e. hard hat, long sleeved shirt, etc.) available for persons manually discharging fireworks.
 - No smoking** – Title 19 CCR, Section 1006 – Smoking is prohibited in any area where fireworks are handled or stored.

- MORTAR INSPECTION**
 - Setup** – Title 19 CCR, Section 982 - Compare list of mortar racks listed on permit with actual equipment on site.
 - Mortar type** – Title 19 CCR, Section 999(a) (2), 999(c) (3) - Mortars are approved for use with type of shells to be fired.
 - Mortar condition** – Title 19 CCR Section 999(b) (4) - Mortars are inspected prior to use for defects, debris, etc.
 - Base plugs** – Title 19 CCR Section 999(c) (2), 992(d) - Base plugs must be securely attached to bottom of mortars.
 - Mortar length** – Title 19 CCR, Section 999(b) (3), 999(c) (1) - Mortars are proper length for size of shells to be fired.

- RACK INSPECTION**
 - Number of tubes** - Title 19 CCR, Section 1002(a) - Racks have no more than 10 tubes per unit.
 - Material used** - Title 19 CCR, Section 1002(a) - Base and ends of racks are nominal 2” thick lumber.
 - Spacing** – Title 19 CCR, Section 1002(a) - Racks have blocks (nominally 2”x4”) separating individual mortars.
 - Side braces** – Title 19 CCR, Section 1002(a) - Racks for mortars 3” or larger have side braces of 1”x6” nominal lumber or ½”x4” plywood.
 - Diagonal braces** - Title 19 CCR, Section 1002(a) - All racks with more than 5 tubes have diagonal side braces.
 - Stability** – Title 19 CCR, Section 1001(f) - Racks are secured to prevent falling over.

TROUGH INSPECTION

- Length limit** - Title 19 CCR, Section 1002(b) - No trough is more than 8 feet in length.
- Material used** - Title 19 CCR, Section 1002(b) - Bottom surface of trough is provided with ¾" plywood if not sufficiently stable to support firing of the mortar.
- Fasteners used** – Title 19 CCR, Section 1002(b) - Troughs are constructed of minimum ¾" plywood and secured with 3/8" through-bolts, rods or angle iron "U" brackets at each end and center.
- Fill material** – Title 19 CCR, Section 1001(a) - Sand or soft dirt, free of rocks or debris, is on-hand to fill trough.
- Separation of mortars** – Title 19 CCR, Section 1001(d), 1001(e) - Minimum separation distance between mortars are provided.
- Bury depth** – Title 19 CCR, Section 1001(a) - Trough is of adequate height to securely bury mortar 2/3 of their minimum legal length.

DRUM INSPECTION

- Material used** – Title 19 CCR, Section 1002(c) – Drums must be constructed of steel, aluminum or plastic.

TRENCHES, ETC. TO BURY MORTARS IN GROUND

- Planking required** - Title 19 CCR, Section 1001(c) - Planking below mortars is provided for unstable or unlevel surfaces.
- Bury depth** – Title 19 CCR, Section 1001(a) - Trenches are of sufficient depth to securely bury mortars 2/3 of their minimum legal length.
- Separation / Spacing** – Title 19 CCR, Section 1001(d) (1), 1001(e) (1) - Minimum separation distance between mortars is provided.
- Fill material** – Title 19 CCR, Section 1001(a) - Sand or soft dirt, free of rocks or debris, is on-hand to fill trench.

AERIAL SHELL INSPECTION

- Seal of Registration** - Title 19 CCR, Section 987.1 - Shells properly labeled for use in California.
- Damage** – Title 19 CCR, Section 1003(a)(2) – Shells must be inspected for damaged lift charge bags, lead fuse tears, tears in the piping of the quick match leaders, and missing safety caps.
- Safety caps** – Title 19 CCR, Section 1003(a) (3) – Safety caps protecting the fuse shall not be removed until firing or electrical hookup.

GROUND DEVICE INSPECTION

- Seal of Registration** - Title 19 CCR, Section 987.1 – Devices properly labeled for use in California.
- Secured and braced** – Title 19 CCR, Section 1003(e)(1) – Set pieces, wheels and mechanical devices shall be braced, guyed and securely attached or set as required to prevent displacement.
- Roman Candles** – Title 19 CCR, Section 1003(e) (2) – Low level Roman Candles, multiple batteries and projectiles shall be securely set to prevent accidental displacement.

- DISCHARGE FALLOUT AREA INSPECTION** – Title 19 CCR, Section 982
 - Location is as per approved permit.
 - Minimum required fallout area is provided based on 100' per inch of shell size.
 - Arrangements provided to secure fallout area when shell loading begins.
- ELECTRICALLY FIRED DISPLAY INSPECTION**
 - Power Source** - Title 19 CCR, Section 992.1 - Power source is restricted to batteries or individually isolated generators.
 - Safety caps** – Title 19 CCR, Section 1003(a) (3) – Safety caps protecting the fuse shall not be removed until firing or electrical hookup.
 - Firing System Safeguards** - Title 19 CCR, Section 992.2 - Firing system must be protected against accidental firing.
 - Circuit Tests** – Title 19 CCR, Section 992.3 - Method for circuit testing is available.
 - Sight Firing** – Title 19 CCR, Section 992.4 - Firing panel is located within continuously unobstructed full view of operator.
- MANUALLY FIRED DISPLAY INSPECTION**
 - Mortar size limit** – Title 19 CCR, Section 999 (a) (1) – Manual firing of mortars 8" or larger in diameter is prohibited – must be electrically fired.
 - Damage** – Title 19 CCR, Section 1003(a)(2) – Shells must be inspected for damaged lift charge bags, lead fuse tears, tears in the piping of the quick match leaders, and missing safety caps.
 - Safety caps** – Title 19 CCR, Section 1003(a) (3) – Safety caps protecting the fuse shall not be removed until firing or electrical hookup.
- RELOADED MORTARS DISPLAY INSPECTION**
 - HDPE Mortars** – Title 19 CCR, Section 999(d) - HDPE Mortars cannot be reloaded within one hour after use.
 - Ready box location** - Title 19 CCR, Section 1003(b) (2) - Ready boxes are located more than 25 feet upwind of the closest mortar.
 - Ready box compartments** - Title 19 CCR, Section 1002(b) (3) - Ready boxes are divided into separate compartments for each shell size.
 - Ready box protective cover** - Title 19 CCR, Section 1003(b) (5) - Ready boxes are covered with a flame-resistive canvas cover.
- OPERATION OF DISPLAY**
 - Age of personnel** – Title 19 CCR, Section 997(3) - No one under the age of 18 is in the firing or fireworks storage areas.

- Spectator safety** – Title 19 CCR, Section 997(2) - Mortars must be aimed over fallout area and away from areas occupied by separators. During discharging of shells, operator observes activities to ensure wind and trajectory are adequate and makes adjustment if necessary.
- Firing system safeguards** - Title 19 CCR, Section 992.2, 1003(d)(1) - All devices are ONLY fired upon or signal of the licensed operator.
- Misfires** – Title 19 CCR, Section - 1003(g)(1) - If a misfire occurs, mortar shall be identified, marked and left undisturbed for a minimum of 5 minutes and then half filled with water.
- POST DISPLAY ACTIVITIES**
 - Discharge and fallout areas security check** - Title 19 CCR, Section 1003(d)(3) - NO ONE permitted to enter display, discharge or fall out areas until pyrotechnic operator has determined the area to be safe and secure.
 - Firing area check** - Title 19 CCR, Section 1003(f) (1) - Entire firing area is inspected by the licensed pyrotechnic operator and crew to locate any unexploded shells. Shells located are doused with water before handling.
 - Unfired shells and misfires** - Title 19 CCR, Section 1003(g)(1), 1003(h) – Unfired shells and misfired must be identified and the mortar left undisturbed for a minimum of 5 minutes, then filled halfway with water. Unfired shells and misfires must then be removed and returned directly to supplier or stored in manner approved on permit.
- REPORTS**
 - State Fire Marshal prior to event** – Title 19 CCR, Section 993.1 – Pyrotechnic operator must notify State Fire Marshal at least 72 hours prior to the event.
 - State Fire Marshal after event** – Title 19 CCR, Section 1005(a), 1005(b) – The licensed pyrotechnic operator provides verbal and written reports to State Fire Marshal for any incident involving injury or death to public or crew, or for any fire requiring emergency action or response resulting from the firing of the show; verbal reports are required within 24 hours, written reports required within 10 working days following the display.
 - Fire Department** – The pyrotechnic operator shall be responsible to provide copies of all written reports required by the State Fire Marshal to the Santa Rosa Fire Department within 14 working days following the display.