

Somerton/Cocopah Fire Department



Guidelines for Obtaining a Fireworks Display Permit

Somerton/Cocopah Fire Department
Fireworks Display Permit Guideline

ARIZONA LAW REGARDING FIREWORKS

Arizona Revised Statutes

36-1601. Definitions

In this article, unless the context otherwise requires:

1. "Fireworks":

(a) Means any combustible or explosive composition, substance or combination of substances, or any article prepared for the purpose of producing a visible or audible effect by combustion, explosion, deflagration or detonation, and toy cannons in which explosives are used, the type of balloon which requires fire underneath to propel it, firecrackers, torpedoes, skyrockets, roman candles, daygo bombs, sparklers or other fireworks of like construction, fireworks containing any explosive or combustible compound, and any tablet or other device containing an explosive substance.

(b) Does not include:

(i) Toy pistols, toy canes, toy guns or other devices in which paper caps containing not more than twenty-five hundredths grains of explosive compound are used if constructed so that the hand cannot come in contact with the cap when in place for the explosion.

(ii) Toy pistol paper caps that contain less than twenty-hundredths grains of explosive mixture, or fixed ammunition or primers therefor.

(iii) Federally deregulated novelty items known as snappers, snap caps, party poppers or glow worms that contain less than twenty-five hundredths grains of explosive compound.

36-1602. Fireworks prohibited

A. Except as otherwise provided by this article, **it is unlawful** to sell, offer or expose for sale, **use, explode or possess** any fireworks.

B. This section shall not be construed to prohibit or restrict the manufacture or possession, by a **qualified pyrotechnic expert**, of aerial set pieces designed for use in pyrotechnical displays, or the display of such set pieces in accordance with the terms of this article. The governing body as defined by section 36-1601 shall determine if the expert is qualified.

36-1607. Seizure

The Arizona highway patrol or any sheriff or other peace officer shall seize, remove or cause to be removed, at the expense of the owner, all fireworks or combustibles offered or exposed for sale, stored or possessed in violation of this article.

36-1608. Violation; classification

A person violating a provision of this article is guilty of a class 3 misdemeanor.

PERMIT PROCEDURE

Application Timeframe. A permit must be secured from the city of Somerton prior to conducting a fireworks display. The applicant of the proposed display must submit a written application for permit at least 15 days in advance of the date of the display.

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Application Form. The applicant must, at a minimum, provide the following information to the Somerton/Cocopah Fire Department in writing when applying for a permit to conduct a fireworks display (This information may be included in the application):

1. The name of the organization sponsoring the fireworks display, including the name, address and phone number of the authorized agent of that organization. Permits are not transferable.
2. The name and fireworks operator certificate number of the pyrotechnic operator responsible for supervising the display, including a photocopy of legal identification. (Proof of qualification of Pyrotechnic submission needed)
3. The date, time of day and exact location of the proposed display.
4. A diagram of the grounds or facilities (for indoor displays) where the display will be held. The diagram must show the point at which the fireworks are to be discharged; the location of all buildings, highways, streets, communication lines and other possible overhead obstructions; and the lines behind which the audience will be restrained. For proximate audience and indoor displays, the diagram must also show the fallout radius for each pyrotechnic device used during the display.
5. The approximate number and types of fireworks and / or pyrotechnic special effects devices to be discharged. Changes in the Display: For indoor and proximate audience displays, any changes adding fireworks or pyrotechnic special effects different from those described in the initial application must be approved in advance by the Somerton/Cocopah Fire Department. All requests for changes **must be submitted** at least **24 hours** prior to the display.
6. The number, names and birth dates of all assistants that will assist with the display. Assistants must be at least 18 years of age.
7. Proof of bond or certificate of insurance in an amount \$1,000,000.00 for the payment of damages that could be caused, either to persons or property, as a result of the display and arising from acts of the sponsor, the pyrotechnic operator, their agents, employees or subcontractors. The insurance form shall also list the City of Somerton as additional insured.

WHAT TO EXPECT

Using the most current National Fire Protection Association 1123 or 1126 as guidance, that the displays is of such character and is to be so located, discharged or fired that it will not be hazardous to property or endanger any person. In addition to reviewing the diagram of the display area submitted with the permit application, the Somerton/Cocopah Fire Department will:

- a. Inspect the areas selected for the discharge site, spectator viewing area, parking areas and designated landing (fallout) area.
- b. For indoor and proximate audience displays, request a walk-through and representative demonstration of the fireworks and / or pyrotechnic special effects as a condition of approval for the issuance of a permit.
- c. Obtain a written plan outlining the manner and location of storage of fireworks both prior to delivery to the display site and at the display site, the type of fire protection (e.g. portable fire extinguishers, standby apparatus/personnel) that will be provided at the discharge site, the means of direct communication with local public safety organizations in the event of an emergency, and the provisions that will be made for crowd control.

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When indoor displays require smoke detectors to be by-passed and / or air-handling systems to be disengaged, the Somerton/Cocopah Fire Department has been notified and that arrangements have been made to have a representative of the fire department present for all displays and demonstrations. The fire department representative shall have a means of direct communication with the department's emergency dispatch center. The sponsoring organization is responsible for the actual costs of providing an on-site fire department representative during the display.

Once the Somerton/Cocopah Fire Department has determined that requirements of the adopted Fire Code have been met, that the proposed display will be supervised by a competent and qualified operator, and that the display will not be hazardous to property or endanger persons, the permit will be issued.

GENERAL SAFETY REQUIREMENTS FOR FIREWORKS DISPLAYS

Supervision. A fireworks display may only be conducted when supervised by a pyrotechnic operator qualified in the State of Arizona.

Operator responsibilities. The certified fireworks operator is responsible for all aspects of the display related to fireworks and other pyrotechnics. While the operator may actively participate in the firing of the display, safety must be the operator's primary concern. The operator must ensure that:

1. No fire or life safety hazard is allowed to exist or occur during the storage, transportation, handling, preparation or use of fireworks.
2. All displays are conducted in accordance with applicable laws, codes, regulations, standards and guidelines relating to fireworks.
3. A sufficient number of qualified assistants are on hand for the safe conduct of the display, that all assistants are fully trained in the proper performance of their assigned tasks and are knowledgeable of safety hazards and the use of portable fire extinguishers.
4. Proper protective gear (i.e., safety glasses and protective clothing) is worn by all personnel involved in the display.
5. A sufficient number of fire extinguishers of a suitable type are present while fireworks and other pyrotechnic materials are being loaded, prepared for firing or fired.
6. Contacting the local fire chief to determine the level of fire protection required for the display. In addition to portable fire extinguishers, fire protection may include standby fire apparatus and personnel at the discharge area and/or down range as deemed necessary by the Fire Chief. When required by the Fire Chief the cost of standby apparatus and / or personnel must be borne by the sponsoring organization. However, such apparatus and personnel remain subject to the chief's orders at all times when so employed.
7. Crowd control monitors are provided around the discharge site to prevent spectators or any other unauthorized persons from entering the site. When agreed to by the sponsor, it is the sponsor's responsibility to provide all or a portion of the required monitors. Provisions for crowd control are subject to approval by the Fire Chief/Police Chief. Monitors should wear some distinctive identification (e.g. badges, colored vests, etc.). Where practical, fencing, ropes or other types of barriers should be used to assist in crowd control.

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This is not intended to be an all inclusive list. Additional requirements may be contained in the most current edition of National Fire Protection Association Standard 1123 or 1126.

On-site Fireworks Storage.

Requirements are contained in the most current edition of National Fire Protection Association Standards 1123 and 1126.

In brief, as soon as fireworks are delivered to the display site, they must be supervised and kept dry at all times. Display fireworks that will be temporarily stored at the site during the fireworks display shall be stored in ready boxes located upwind and at least 30 feet from the mortar placement and separated according to size and their designation as salutes.

Assistants. All assistants used at a fireworks display must be at least 18 years old, properly instructed and continually supervised. The name and date of birth of each assistant must be recorded on the Fireworks Operator Display Report filed by the supervising operator.

Sponsor responsibilities. The sponsor of the fireworks display is responsible for the following:

1. Obtaining the required state, city or county permit for the display.
2. Ensuring that the Somerton/Cocopah Fire Department has been contacted regarding requirements for standby fire apparatus and/or personnel.
3. Providing crowd control monitors around the discharge site to prevent spectators or any other unauthorized persons from entering the site (requires prior agreement of both the sponsor and supervising pyrotechnic operator). Provisions for crowd control are subject to approval by the Somerton/Cocopah Fire Department. Monitors should wear some distinctive identification (e.g. badges, colored vests, etc.). Where practical, fencing ropes or other types of barriers should be used to assist in crowd control.

This is not intended to be an all inclusive list. Additional requirements may be contained in the most current edition of the National Fire Protection Association Standard 1123 or 1126.

OUTDOOR DISPLAYS

The display, storage, use and handling of fireworks and pyrotechnic special effects materials must be in accordance with the most current edition of the National Fire Protection Association standard 1123.

While it is not the intent of this guideline to duplicate or replace the requirements of the applicable codes and standards, following are some of the general safety factors the Somerton/Cocopah Fire Department will consider before making a determination as to whether a fireworks display should be authorized.

Location of mortars.

70 ft. of separation must be provided for every inch of internal mortar diameter of the largest aerial shell to be fired. For example, if the internal mortar diameter of the largest aerial shell to be fired is 3 inches, mortars must be separated from spectator viewing areas, spectator vehicles and approved buildings by at least 210 feet.

Separation distances must also be doubled from bulk storage areas of materials that have a flammability (e.g. gasoline), explosive (e.g. fertilizer) or toxic hazard (e.g. chlorine).

When unusual or safety-threatening conditions are present, the Somerton/Cocopah Fire Department may require that these distances be increased.

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Location of ground pieces.

Ground pieces having movable parts (e.g. revolving wheels, Roman candle batteries, and items employing large salutes) must be located at least 125 ft. from spectators and vehicles. Ground pieces having no movable parts (Examples of ground display pieces of low hazard potential are items such as lancework, gerbs or fountains, and illuminations.) are allowed not less than 75 ft. from spectators and vehicles.

Discharge site.

The area selected for the discharge of aerial shells must be located so that the trajectory of the shells will not come within 25 ft. of any overhead object or other potential obstructions.

Only the operator and necessary assistants are allowed in the discharge area while the display is in progress.

Designated landing / fallout area.

The area over which aerial shells are fired and into which debris and malfunctioning aerial shells can fall (i.e. the designated landing area or fallout area) must be a large, clear, open area approved by the Somerton/Cocopah Fire Department. Spectators, unauthorized vehicles, watercraft, and readily combustible materials must not be allowed in this area during the display.

Smoking and open flames.

Smoking materials, matches, lighters or open flame devices are prohibited within 50 ft. of any area where fireworks or other pyrotechnic materials are present.

NO SMOKING OR OPEN FLAME signs must be conspicuously posted in the area.

Illumination.

Operators and attendants must use only flashlights, chemiluminescent lights or electric lighting for artificial illumination.

Supervision of fireworks.

Fireworks must not be left unattended or allowed to become wet at the display site.

Ready boxes.

Ready boxes (i.e. storage containers for aerial shells at the site of a fireworks display) must be located at least 30 ft. in an upwind direction from mortars.

Display discontinued.

If the Somerton/Cocopah Fire Department or pyrotechnic operator determines that there is a lack of crowd control or that the crowd is in danger, the display must be immediately discontinued. If at any time high winds or wet weather create a danger, the display must be postponed until weather conditions are acceptable to the fire chief and the certified pyrotechnic operator.

Range inspection.

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The entire firing range must be inspected immediately following a display, and prior to allowing public access, for the purpose of locating unexploded aerial shells. If the firing range cannot be thoroughly inspected due to darkness, the site must be re-inspected the following morning.

This is not intended to be an all inclusive list. Additional requirements may be contained in the most current edition of the National Fire Protection Association Standard 1123.

PROXIMATE AUDIENCE DISPLAYS

All indoor displays of pyrotechnic special effects, and outdoor displays where such effects are used at distances less than those previously specified this guideline & NFPA guidelines, are considered proximate audience displays.

The display, storage, use and handling of fireworks and pyrotechnic special effects materials for proximate audience displays must be in accordance with the most current edition of the National Fire Protection Association Standard 1126.

Demonstration and approval.

When required by the Somerton/Cocopah Fire Department, a test must be conducted to demonstrate the safe use of fireworks and /or pyrotechnic special effects material prior to normal use.

Fire watch.

Where an indoor display requires smoke detectors to be by-passed and / or air-handling systems to be disengaged, the Somerton/Cocopah Fire Department must be notified and arrangements made to have a representative of the fire department (i.e. fire watch) present for all displays, rehearsals and demonstrations.

All fire safety and other building systems that have been disarmed or disengaged must be reinstated to normal operating condition as soon as the likelihood of false alarms from the use of pyrotechnics has passed.

In any case, the fire watch must be maintained until the restoration of normal functioning has been verified.

Separation distances.

Each pyrotechnic device fired during a performance must be separated from the audience by at least 15 ft, or twice the fallout radius of the device, whichever is greater, unless otherwise approved by the Somerton/Cocopah Fire Department. For example, if a pyrotechnic device has a fallout radius of 10 ft., a minimum distance of 20 feet must separate the device from the audience.

Concussion mortars must be separated from the audience by at least 25 ft.

Display discontinued.

If the Somerton/Cocopah Fire Department or pyrotechnic operator determines that there is a danger to spectators, the display must be immediately discontinued.

Types of devices allowed.

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All pyrotechnic devices and materials used indoors must be specifically manufactured and labeled for indoor use.

Smoke control.

When pyrotechnic special effects material is fired within a building, the quantity of smoke developed must not obscure the visibility of exit signs or paths of egress travel.

Smoking/open flame.

Smoking shall not be permitted within 25 ft. of the area where pyrotechnics are being handled or fired, except for smoking done as part of the performance as approved by the fire chief and the pyrotechnic operator.

Pyrotechnic materials shall not be stored within 50 ft. of any unprotected source of heat or open flame.

Attending of materials.

No pyrotechnic materials or devices shall be left unattended unless they are in an approved secured location.

Precautions.

Precautions must be taken so that no part, projectile or debris from pyrotechnic materials or devices damages overhead properties, overhead equipment, automatic sprinkler or detection systems, or the ceiling and walls of the performance site.

Notice to patrons.

The operator of a facility where an indoor fireworks display occurs must provide notice in a prominent place as approved by the Somerton/Cocopah Fire Department informing patrons attending a performance when indoor fireworks will be part of the performance.

This is not intended to be an all inclusive list. Additional requirements may be contained in the most current edition of the National Fire Protection Association Standard 1126.

ATTACHMENTS

The following forms are included as attachments to these Guidelines:

- American Pyrotechnics Association Proximate Pyrotechnics Checklist



Proximate Pyrotechnics Checklists

Disclaimer

The following Checklists contain safety information associated with the presentation of an indoor or “proximate” pyrotechnics event and are intended to provide an overview regarding the proper procedures to be followed. These Checklists are offered by the American Pyrotechnics Association (APA) to assist in safely producing events incorporating indoor pyrotechnics.

The Checklists are not intended to be all encompassing, exhaustive treatments of every aspect of a proximate pyrotechnics production. The Checklists also do not apply to certain types of productions, for example, motion picture and television productions, and other events where the audience is not proximate to the pyrotechnics. The checklists may need to be augmented by the team members to include special circumstances and shifting responsibilities for certain aspects of an event.

The APA, its officers and directors, and its members make no warranties, express or implied regarding the information provided in the attached Checklists. Indeed, APA, its officers and directors and its members expressly disclaim any liability whatsoever for the use of these Checklists. In no event shall they be liable for any damage, injuries, costs or expenses relating to the use the Checklists. Users of proximate pyrotechnics are encouraged to seek legal counsel and other appropriate professional assistance prior to utilizing proximate pyrotechnics in any particular jurisdiction.

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PROXIMATE PYROTECHNICS CHECKLISTS

I. Pre-Production Checklist (Pyrotechnician)

1. Prepare and file permit application for pyrotechnics (NFPA 1126: 4.2, 4.3)
2. Determine what regulatory standard is used for the jurisdiction
3. Prepare pyrotechnic material description (NFPA 1126: 4.3.2 (j))
4. Review production schedule
5. Installation plot plan and specifications (NFPA 1126: 4.3.2 (k))
6. Determine insurance levels, have insurance certificate prepared with appropriate additional insureds and filed (NFPA 1126: 4.3.2 (i))
7. Determine any pyrotechnic licenses required and other qualifications of Personnel (NFPA 1126: 4.3.2 (h))
8. Plan pyrotechnic transportation, handling and storage (NFPA 1126: 3.1, 3.2)
9. Determine and plan for security requirements (NFPA 1126: 6.1.3, 6.1.4, 6.5.6)
10. Determine venue management contact information (NFPA 1126: 4.3.2, 6.1.3)

II. Site Inspection Checklist (Pyrotechnician & Venue Management)

1. Confirm venue management consent to pyrotechnics
2. Confirm venue management or production permit for event
3. Verify plot plan measurements and accuracy (NFPA 1126: 4.3.2 (j) and (k))
4. Verify AHJ approval of venue compliance with life safety standards
5. Determine fire protection systems, controls and equipment
6. Determine HVAC systems and controls
7. Determine show management production plan
8. Determine venue management safety plans, crowd control, security and emergency plans and procedures
9. Determine personal safety requirements for pyrotechnicians (e.g., fall protection plans and equipment)
10. Verify AHJ approval of flame retardant materials in public areas and pyrotechnic installation sites
11. Determine approved & secure storage and work areas for pyrotechnics (NFPA 1126: 3.1.1, 4.3.2 (l) and (m), 6.1.3, 6.1.4)
12. Determine hazmat shipping depot (venue) if required

III. Production Meeting Checklist (Production Management)

1. Confirm installation plan and schedule (NFPA 1126: 4.2, 4.3)
2. Schedule live pyrotechnic demonstration (NFPA 1126: 4.4.1, 4.4.2)
3. Schedule rehearsal and performance
4. Determine need for HVAC/fire protection system control adjustments and personnel responsibilities (NFPA 1126: 4.4.3, 6.1.6, 6.6.6, 6.7.6, 6.7.7)
5. Assign responsibility for hazard communication with participants and staff (NFPA 1126: 6.6.1)
6. Review emergency action plan and assign responsibilities

7. Coordinate pyrotechnic control points, communications and line of sight (NFPA 1126: 6.3.5, 6.3.6, 6.6.5)
8. Review crew lists and assignments
9. Review safety plans and procedures and personal protective equipment (NFPA 1126: 6.5.7)

IV. Walkthrough Inspection Checklist (AHJ)

1. Pyrotechnic walkthrough and demonstration
 - A. Confirm venue management consent to pyrotechnics
 - B. Verify pyrotechnic plot with actual site dimensions/adjustments
2. Type of devices – verify indoor/proximate use & performance specifications (NFPA 1126: 5.1, 5.2, 5.3, 5.4)
3. Verify quantities, locations, and cueing of devices to be used
4. Verify secure areas and methods for restricting unauthorized persons from entering.
5. Verify that all devices are securely fixed with proper audience separation
 - A. Minimum 15ft or 2X fallout radius (NFPA 1126: 6.4.1)
 - B. Concussion mortars min 25ft in secured area (NFPA 1126: 6.4.2)
 - C. Trajectory of comets/mines not over audience (NFPA 1126: 6.2.11)
 - D. Waterfall effect area to be free of flammable materials (NFPA 1126: 6.2.12)
 - E. Wire rocket effects to be properly secured and terminated (NFPA 1126: 6.2.9)
 - F. Airbursts over audience to be minimum height of 3 times the diameter of effect, and no sparks within 15 ft of floor (NFPA 1126: 6.2.14(1) & (2))
6. Check fire fighting equipment
 - A. Minimum of 2 approved water fire extinguishers (NFPA 1126: 6.1.1.1)
 - B. Other firefighting equipment as needed/required (NFPA 1126: 6.1.1 & 6.1.1.2)
 - C. Existing on-site fire fighting equipment/systems
7. Pyrotechnic firing systems
 - A. Verify operational/safety features and functions of systems (NFPA 1126: 6.3.2 & 6.3.3)
 - B. Verify operator & spotters have clear view of effects and communication with operator (NFPA 1126: 6.3.5)
8. Determine plan for HVAC /detectors adjustments & notification of demonstration
9. Determine need for demonstration of representative effects
10. Check plans for approved and secure on-site storage and preparation areas (NFPA 1126: 4.3.2 (I), 6.1.3 & 6.1.4)
 - A. Separation from heat/flame sparks (NFPA 1126: 3.3)
 - B. No smoking within 25ft (signage) (NFPA 1126: 6.5.5)
 - C. Materials stored/handled neatly and orderly (NFPA 1126: 6.5.1)
11. Check plan for personal protective equipment for preparation and loading of pyrotechnics (NFPA 1126: 6.5.7)

V. Rehearsal & Show Checklist (Pyrotechnician)

1. Hold safety meeting with all participants
2. Hold rehearsal, if required (all requirements of following section apply)
3. Performance

- A. Determine how final alert will be given to all performers, crew and support personnel and who will give the alert
- B. Conduct final inspection immediately preceding performance
 - a) Confirm pyrotechnic wiring connections and firing system
 - b) Confirm device placement, mounting, orientation and readiness
 - c) Confirm firefighting equipment in position
 - d) Confirm spotters in place with communication
- C. Execute or fire show
 - a) Confirm and maintain audience separation, performers positioned correctly, support personnel readiness
 - b) Confirm and maintain unobstructed view of effects by operator and/or spotter
 - c) Observe effect performance for safe operation

VI. Post-Show Checklist (Pyrotechnician)

- 1. Inspect all pyrotechnic devices to confirm firing (NFPA 1126: 6.7.1)
- 2. Confirm the integrity of fallout zones and adjacent areas
- 3. Return unfired devices to approved storage or repackage for transportation (NFPA 1126: 6.7.2)
- 4. Confirm reactivation of any disarmed fire detection/HVAC systems to normal operating mode (NFPA 1126: 6.7.6)
- 5. File post-show report, if required

Source: Proximate Pyrotechnics Committee, American Pyrotechnics Association

Reference: National Fire Protection Association, NFPA 1126 Standard for the Use of Pyrotechnics Before a Proximate Audience, 2001 Edition.

Question & comments may be directed to:

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