Fireworks displays are a beautiful way to highlight a holiday weekend. Many communities hold these events, and, often, fire departments are the organizations that sponsor them.

Unfortunately, fireworks can also be the cause of serious injuries and property damage. The National Fire Protection Association (NFPA) reports that in 1997 an estimated 8,300 people suffered fireworks-related injuries severe enough to require emergency room treatment. While children were the largest group affected, at least a third of those injured were adults aged 25-44. Property damage each year runs into the millions: In 1996 an estimated 24,800 fires involving fireworks caused $26.8 million in direct damage.

Public fireworks displays account for a very small share of the problem. But when things go wrong, they can go very wrong. Imagine having an aerial shell fall and explode into a crowd of people— not only would there be many injuries, but the potential for liability suits is extremely high.

So, what should you do? Consider some of the following procedures to prevent accidents and limit your liability.

First and foremost, contract with a professional fireworks company to fire the shells. Ask for their certificate of insurance and that your organization be named as an additional insured on their policy. The limits of their liability policy should be at least $1 million for bodily injury and property damage.

If you use members of your organization to handle the display instead, make sure they have been trained and certified to shoot fireworks. A number of states require licensing or certification in this regard. A Pyrotechnics Display Operator Training Program can also be obtained from Pyrotechnics Guild International, Inc.

Work with the fireworks company to determine adequate distances from which spectators are separated from the display, discharge and fall-out areas.

The NFPA Standard 1123 gives specific requirements for the display area: Allow at least a 7099 radius for every inch of internal mortar diameter of the largest aerial shell fired. There should be no spectators, dwellings or parking areas in this radius.

The shell trajectory in the discharge area should have a 2599 clearance to any overhead objects. Ground display pieces should be at least 7599 from any spectator viewing and parking areas.

The fall-out area, where debris from spent shells and any malfunctioning aerial shells fall, should be free of all spectators, vehicles or combustible materials.

Provide adequate fire protection, fire apparatus and emergency medical service during the display. Monitors should be assigned to control spectators and prevent them from accessing the discharge site. They should also be alert for any changes in the fall-out area due to a wind shift and be prepared to alert the fire apparatus operators, or, if need be, stop the display.

Clean-up is critical. Many injuries, especially to children, are caused by handling unexploded fireworks. Find out who is responsible for clean-up – the operator or promoter – and don’t give the public access to the display area until after a daylight clean-up takes place. You should also have procedures in place to deal with unexploded shells found at this time.