

# Fireworks Safety Awareness Course 2021

*Presented by: Colwood Fire, Langford Fire and View Royal Fire*

# Objectives

- ❑ Knowledge of Municipal, Provincial and Federal Regulations
- ❑ Knowledge of the Safe Handling and Storage of Consumer Fireworks
- ❑ Knowledge of the Safe Use and Recommended Disposal of Consumer Fireworks

# History of Fireworks



In Canada, the popularity of fireworks began in the late 1940's. With transportation methods growing, mass distribution followed. As a result, government and emergency officials pushed for restrictions in the firework industry.

In the 1970's, common firecrackers and skyrocketes were met by a complete ban following public outcry. This was due to the violent nature of these devices in the hands of our youth.

In 1979 the Provincial Government of BC created the Firework Act to control the sale of fireworks within the province. This Act was revised in 1996.

# Local History of Fireworks

In the 1990's, the use of fireworks became such a large concern to police and municipalities alike, that each municipality drafted its own bylaw regulating their use. The Westshore RCMP had trouble enforcing multiple bylaws in their area of responsibility.

With the intention to draft a common bylaw, the municipalities of Colwood, Langford and View Royal, in conjunction with the Westshore RCMP, formed a regional fireworks group. Together they constructed a common bylaw which was formally adopted in 2006.

# US Firework Statistics - FIRES



**NFPA** - National Fire Protection Association reports:

In 2011, fireworks caused an estimated 17,800 reported fires.

- ❑ 1,200 total structure fires
- ❑ 400 vehicle fires
- ❑ 16,300 outside and other fires

These fires resulted in an estimated 8 reported civilian deaths, 40 civilian injuries and \$32 million in direct property damage.

# US Firework Statistics - INJURIES

In 2012, NFPA reports that U.S. hospital emergency rooms treated an estimated 8,700 people for fireworks related injuries;

- 55% were to the extremities
- 31% were to the head

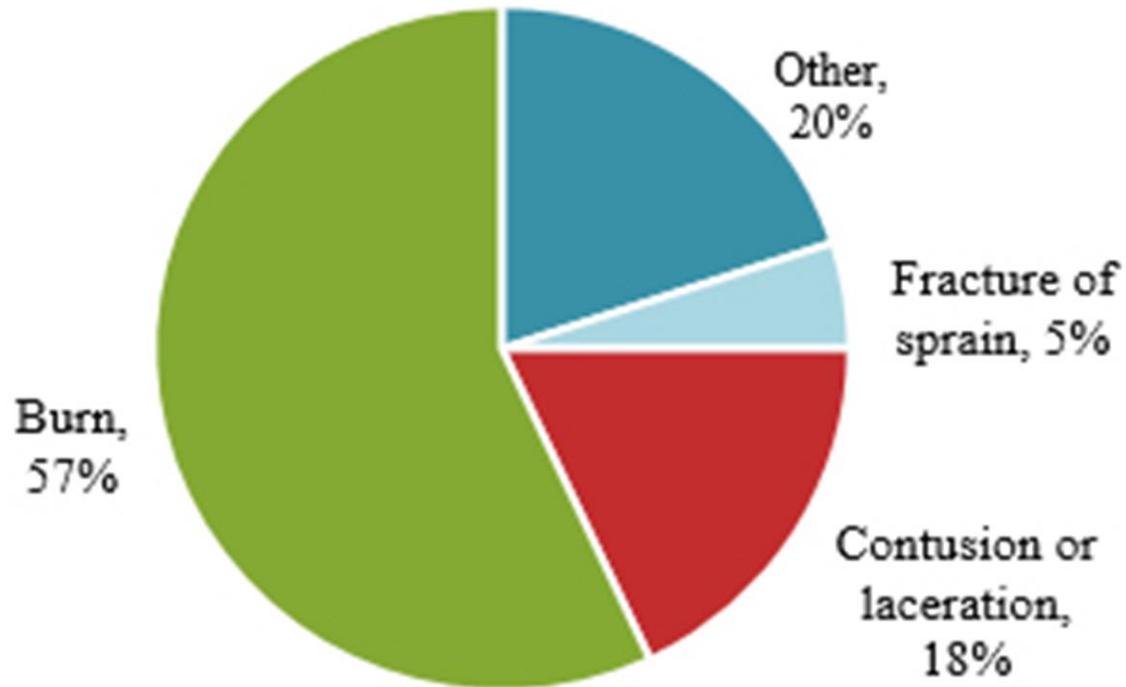


The risk of fireworks injury was highest for:

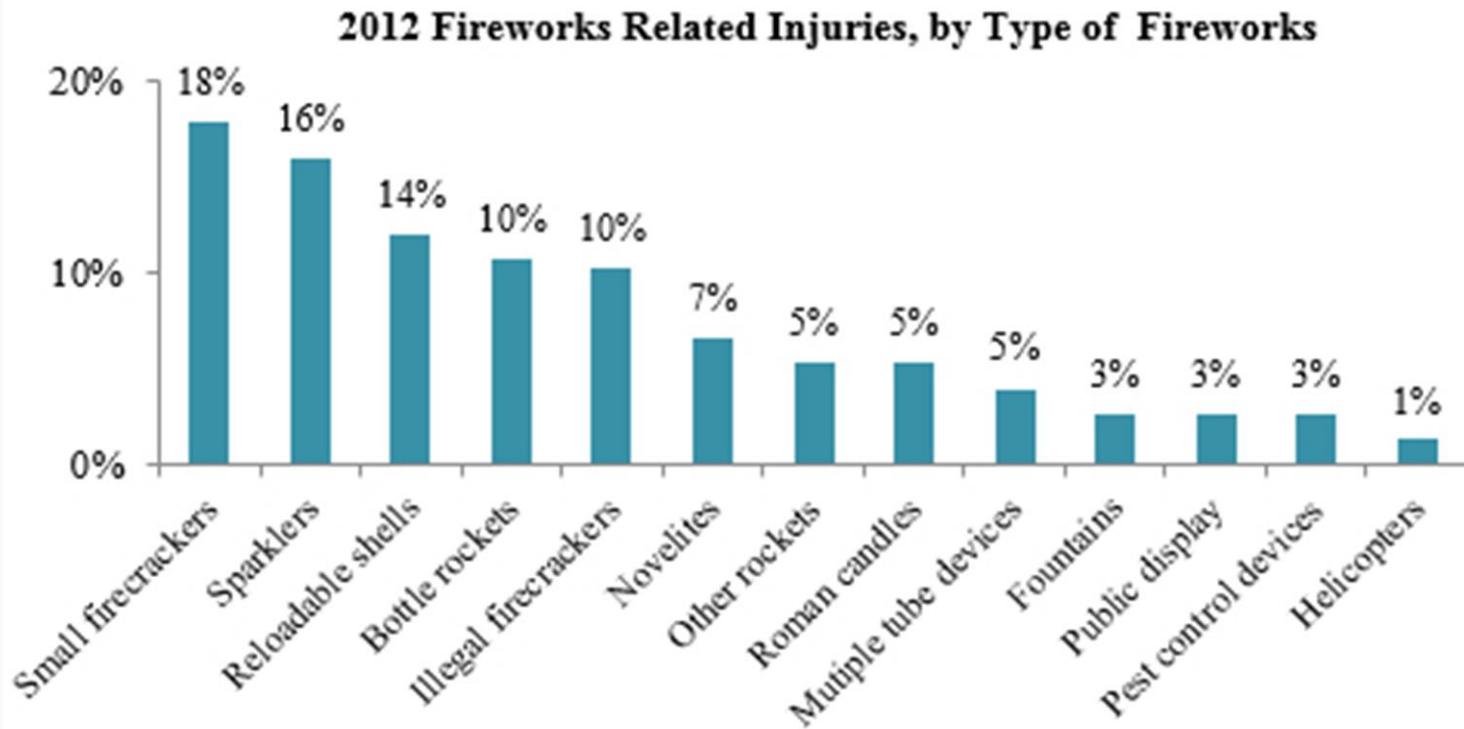
- young people ages 15-24
- followed by children under 10

# Related Injuries

**2012 Fireworks-Related Injuries  
by Type of Injury**



# What Caused the Injuries





# Canadian Statistics

Due to relatively low numbers, Canada does not keep national statistics on property damage, deaths or injuries specifically related to fireworks.

However, in May 1998 the Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP) reported 175 fireworks related injuries:

- children 10 to 14 years of age sustained 42%
- 77% were to males
  - Halloween accounted for 20%, (*all in western Canada*)
  - Victoria Day for 15 %, (*all in central Canada*)
  - 9% of the injuries specific to Canada Day

# Fireworks in Canada – 3 Categories

- ❑ Display Fireworks are high-hazard firework articles designed for use **by professionals**
  - ❑ These articles include items such as aerial shells, cakes, roman candles, waterfalls, lances and wheels
  
- ❑ Pyrotechnic (Special Effects) are high-hazard pyrotechnics articles designed for use **by professionals**
  
- ❑ Consumer Fireworks are low-hazard firework articles designed for recreational use by the public
  - ❑ These articles include items such as roman candles, sparklers, fountains, wheels, volcanoes, mines and snakes

# Fireworks Regulation

*Bylaw No. 891, 2006 (Colwood)*

*Bylaw No. 1033, 2009 (Langford)*

*Bylaw No. 640, 2006 (View Royal)*

# Bylaw 891, 1033, 640

- ❑ This bylaw covers all three classes;
  - ❑ **Display Fireworks**
  - ❑ **Pyrotechnic (Special Effects)**
    - ❑ Both of these classes have special provisions under this bylaw which are not covered in this Fireworks Awareness Safety Course
    - ❑ For more information on these classes, contact your local municipality or fire department
  - ❑ **Consumer Fireworks**
    - ❑ Will be covered in detail throughout this Fireworks Awareness Safety Course

# Bylaw No. 891, 1033, 640 - Overview



In 2006, the Town of View Royal and Cities of Colwood and Langford adopted a fireworks bylaw to regulate the:

- Sale
- Possession
- Discharge

of consumer fireworks in their respective communities...

Their vision was to reduce personal injury and property damage through the required training and permit process.

# Bylaw 891, 1033, 640

## PERMITS FOR CONSUMER FIREWORKS

- ❑ Any person eighteen (18) years of age or older desiring to discharge consumer fireworks must apply for a permit
- ❑ Permit applications for **Consumer Fireworks** must be submitted to the municipality no later than 12:00 p.m. on October 31<sup>st</sup>. If October 31<sup>st</sup> falls on a non-business day, then the deadline will be no later than 12:00 p.m. on the last business day prior to October 31<sup>st</sup>
- ❑ Completion of the municipal Fireworks Safety Awareness Courses
  - ❑ Course is only valid for three years
- ❑ Payment of the permit fee for consumer fireworks - **\$1**
- ❑ **\*\*** if the consumer fireworks event is to occur on property that is not owned by the applicant or is on property owned or controlled by the municipality, a written agreement of the property owner must be submitted

# Bylaw 891, 1033, 640 - Section 3 - Prohibitions



- ❑ **No person** may hold, possess, store, discharge or otherwise use consumer fireworks or display fireworks **without a permit**
- ❑ **No consumer fireworks** or display fireworks **permit holder** may hold, possess, store, discharge or otherwise use consumer fireworks or display fireworks in **contravention of a permit**

# Bylaw 891, 1033, 640 - Section 3 - Prohibitions



- ❑ **No person** may sell fireworks
- ❑ **No person** may discharge consumer fireworks
  - ❑ except on October 31st of each year between 5:00 p.m. and 10:00 p.m.
  - ❑ or through exceptional circumstances as stated in the municipalities policy
- ❑ **No person** may buy, sell, hold, possess, store, discharge or otherwise
  - ❑ use any prohibited fireworks
  - ❑ use firecrackers
  - ❑ use fireworks in a manner that increases the risk of physical injury to any person or damage to any public or private property

# Bylaw 891, 1033, 640 - Section 3 - Prohibitions



## Regarding Minors:

- ❑ **No person under the age of eighteen (18) years** may hold, possess, store, discharge or otherwise use any fireworks
- ❑ **No person** being the parent or guardian of any person under the age of eighteen (18) years shall allow that person to hold, possess, store, discharge or otherwise use any fireworks

# Bylaw 891, 1033, 640 - Enforcement & Fines

**Every person** who possesses or discharges fireworks contrary to the provisions of this bylaw commits an offence and shall when directed to do so, surrender all fireworks in their immediate possession to a peace officer.

**Any person** guilty of an infraction of this bylaw is liable, on summary conviction, to a fine *(or imprisonment not exceeding the maximum allowed by the Offence Act)*;

- \$500 Sale of fireworks
- \$100 Possess prohibited fireworks
- \$100 Possess firecrackers
- \$100 Possess fireworks without permit
- \$100 Underage possession
- \$100 Allow underage possession
- \$100 Discharge without permit
- \$200 Unsafe discharge
- \$100 Contravene permit
- \$100 Owner/Occupier allowing fireworks
- \$250 Obstruction of peace officer

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# Purchasing, Transporting & Storage

*of Fireworks*

# Purchasing Fireworks



- ❑ Purchase only from authorized dealers
- ❑ You must be at least eighteen (18) years of age to purchase fireworks
- ❑ All authorized fireworks will appear in both official languages (English & French)
  - ❑ \*Please note, bilingual labels do not guarantee the firework is authorized\*
- ❑ Do not be tempted to smuggle fireworks into Canada from another country

# Transporting Fireworks

- ❑ Do not transport fireworks in the passenger compartment of a vehicle
- ❑ Always put them in the trunk
- ❑ In the absence of a trunk (e.g., van or pick-up truck), transport fireworks in a non-sparking container with a lid



# Storage of Fireworks

- ❑ Always store fireworks in a cool, dry place and keep them away from children
- ❑ Check instructions for special handling directions
- ❑ The maximum amount of fireworks that can be stored in a dwelling is 10 kg gross weight
  - ❑ Any amount in excess of this must be stored in a separate, locked building



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# Set-up & Safe Use

*of Fireworks*

# Site Setup for Fireworks

The background of the slide features a dynamic water scene. In the upper right, a stream of water falls, creating a blurred, white, and blue spray. The lower portion of the image shows the surface of water with numerous ripples and reflections, creating a shimmering, textured effect.

It is Important that the simple safety procedures are followed:

## **Read All Instructions**

- Carefully read all the instructions for each firework ahead of time

## **Have Water Ready**

- Keep a charged hose or bucket filled with water close by in case of a malfunction or fire
- Keep a separate water bucket or bin for discarded fireworks

# Site Set-up for Fireworks

Carefully read all the instructions for each firework ahead of time.

## **Ground-Based Fireworks**

- Always on a hard, flat and level surface to ensure stability of the item
  - Asphalt, concrete, sand, etc...
  - Grass is typically not suitable (for stability) and wood or other combustible bases are not recommended due to the potential of fire

## **Aerial Fireworks (Roman Candles, etc.)**

- Start with a hard flat surface and use a large pail, bin or non-combustible box filled with sand or soil
- Bury (do not pile) the device to half it's length in the sand or soil

# Safe Use of Fireworks

## Use Fireworks Outdoors

- Never use fireworks indoors; they are designed for outdoor use only

## Check For Wind

- Check wind direction
- Check wind speed
- Fireworks should be lit with the prevailing wind blowing away from spectators and close dwellings
- NEVER set off aerial fireworks in strong winds



# Safe Use of Fireworks

## Use Proper Eye Protection and Wear Proper Clothing

- Protect your eyes with safety glasses or safety goggles
- Wear non-flammable clothing such as cotton;
  - NEVER wear synthetic fiber clothing (nylon, polyester) when firing

## Keep Children Away From Fireworks

- Never let children handle, play with or discharge fireworks under any circumstances

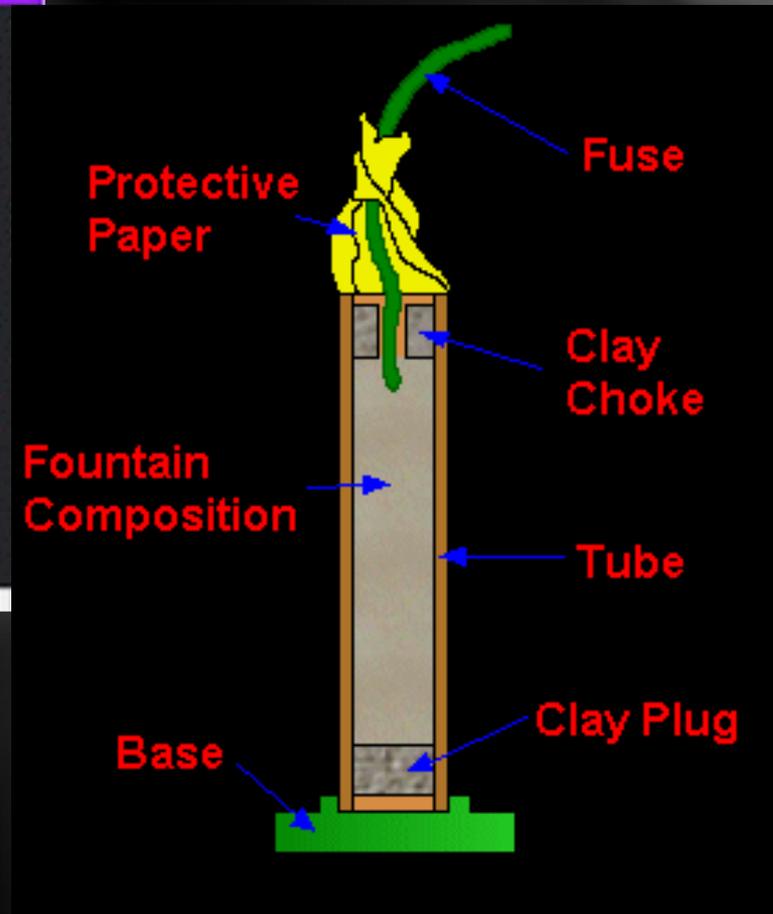
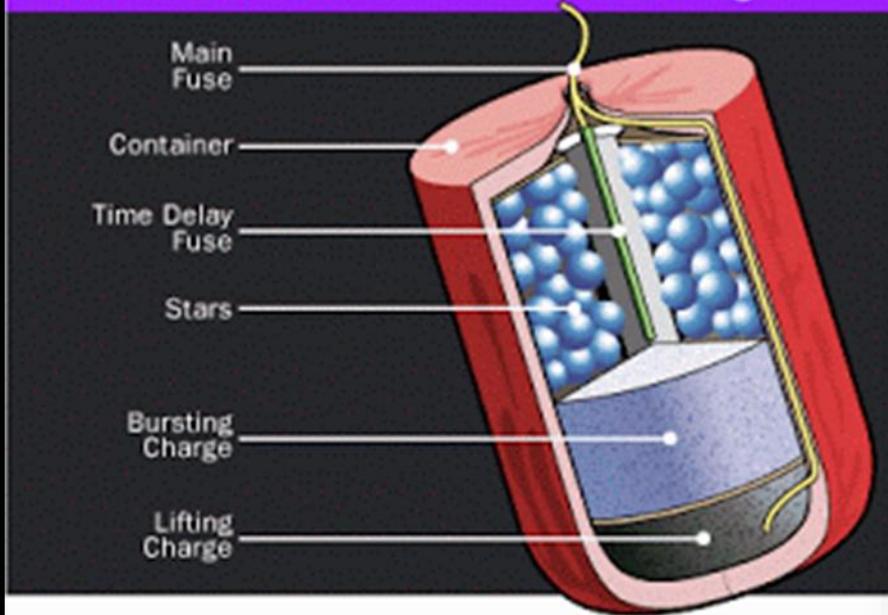
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# Igniting and Discarding

*of Fireworks*

# Understanding How They Work

## How Fireworks Work Basic Aerial Design



# Igniting of Fireworks

- ❑ During a fireworks show, store the unused fireworks away from the firing area and keep them covered to prevent stray sparks from prematurely setting them off
- ❑ Never smoke while handling fireworks

## When lighting,

- ❑ never put any part of your body or head over the firework
- ❑ never hand hold them or insert them into other means of containment such as pipes....
- ❑ never point or throw them at people or other sensitive/flammable targets



# Igniting of Fireworks



## TOP-WICK or SIDE-WICK FIREWORK

- Plant firework at least 3 inches in a bucket of sand or soil
- Tilt 5 - 10 degrees away of audience

# Igniting of Fireworks



## CONES, FOUNTAINS, MORTARS or MINE BURTS

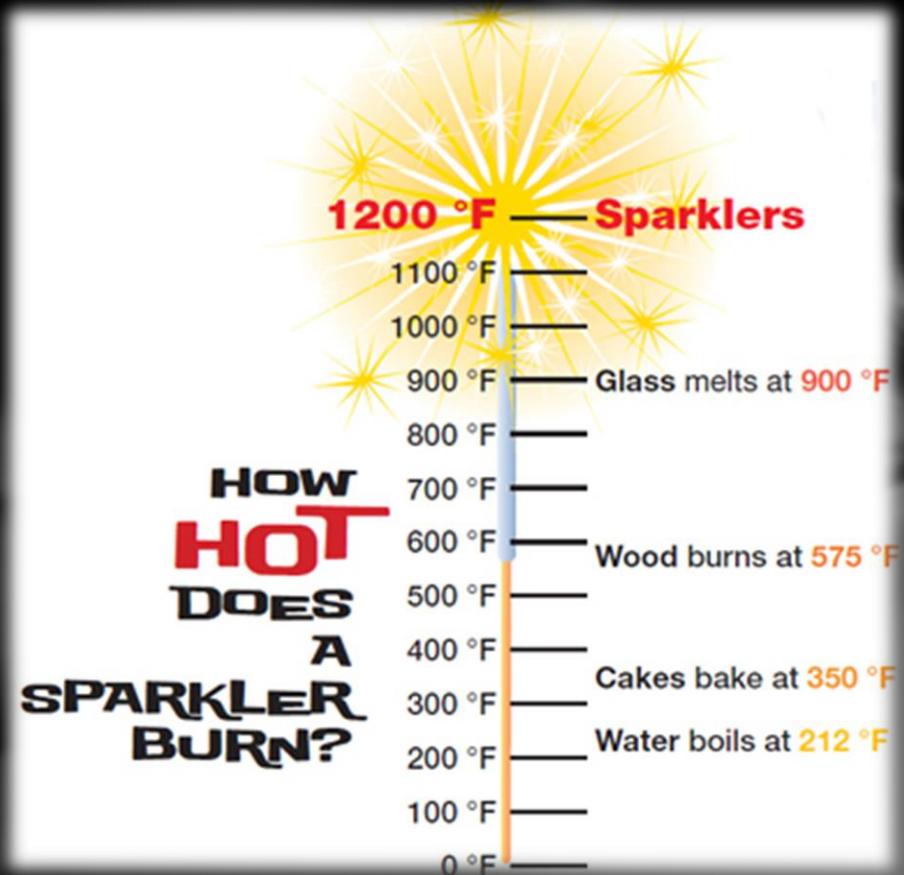
- Place on flat ground
  - Asphalt
  - Concrete
  - Partially bury the base in sand

# Igniting of Fireworks



## Sparklers

- Sparklers can burn as hot as 650 C (1200 F)
- Keep everyone 6 feet apart
- Do not allow anybody to chase or wave sparklers at each other or throw them
- Not for children, keep out of the reach of children



# Discarding of Fireworks

## Duds or Misfires

- Never attempt to re-light fireworks that have misfired (duds)
- Wait 30 minutes and then place them in a bucket of water

## Clean-Up After the Show

- Wait 30 minutes after the display has finished
- Check the firing area for duds
- Clean up all debris
- Follow up again the next morning



# 3 Things to Remember



- ❑ **Never point or throw fireworks** at anyone or anything – people, pets, cars or buildings
- ❑ **Never hold fireworks** in your hand while lighting them
- ❑ **Never attempt to re-light** or move fireworks that fail to go off

Exam Time!  
Follow the link...

[https://forms.office.com/Pages/ResponsePage.aspx?id=Rf5N-51kIEKFSXZPIL8F8\\_vmFsJso-JApOqR2Nsh3WIUNE5RTVRWWENaUoJNOFFCVo1aOVRWT1k5Ni4u](https://forms.office.com/Pages/ResponsePage.aspx?id=Rf5N-51kIEKFSXZPIL8F8_vmFsJso-JApOqR2Nsh3WIUNE5RTVRWWENaUoJNOFFCVo1aOVRWT1k5Ni4u)