Factsheet: FireSmart®, Exterior Home Sprinklers and Structure Protection Units

- When homeowners implement FireSmart building and landscaping guidelines, sprinkler technologies can increase a structure's chance of withstanding a severe wildfire.

Exterior Home Sprinkler Systems

- Garden sprinklers and roof-watering systems should not be considered an alternative to the application of FireSmart principles and guidelines. Rather, it's suggested that their use be a supplement to already proven FireSmart strategies.

- The function of an exterior sprinkler system is to minimize the opportunity for ignition by wetting the home and surrounding property. Exterior sprinkler systems should be able to protect a structure against wind-blown embers, radiant heat and direct flame contact.

- Exterior sprinklers systems can be mounted in one or more locations, including the roof, under the eave at the edge of the roof or on the property, in which case the sprinklers are directed at the home from multiple locations surrounding it.

- If you decide to use a sprinkler for protecting your property from an approaching wildfire, focus on the Non-combustible Zone 0 to 1.5 metres from a structure.

- Test the sprinkler set up well in advance to identify areas in the Non-combustible Zone that the sprinklers may not cover. Check with your local fire department for advice on configuration and deployment of exterior sprinklers, as well as any potential impacts their use may have on the local water supply.

- Keep in mind that exterior sprinkler systems may become unreliable or unserviceable during a wildfire for a number of reasons:

  - sprinklers may require a significant water supply and are subject to mechanical failure;

  - the soaking effect of sprinklers may be lost in high fire danger weather conditions or when equipment failures occur;

  - improper or prolonged use of exterior sprinklers may result in water damage to the structure;

  - if hydroelectric supply is damaged or intentionally shut down during a wildfire, exterior sprinklers may not function due to loss of power and/or water supply;

- some systems can be activated manually or by an automated device, such as a sensor that detects heat or flame, or by an SMS-enabled cell phone. The ability of these systems to activate based strictly on an ember exposure has not been determined. Since wind-blown embers can be transported for more than a kilometer from the flame front of a wildfire, this may be a limitation;

- getting to rooftops in the windy, smoky conditions that wildfires often produce can be hazardous; and

- unnecessary use of water during interface fire incidents may reduce the firefighting water supply where it is needed most.

- Learn more from the [Exterior Sprinkler Systems research fact sheet from FireWise USA](#).

Structure Protection Units

- Structure Protection Units (SPUs) are one of the tools a community can use to help protect homes during interface fires.

- Structure Protection Units are often deployed as a precautionary measure to dampen roofs and areas around structures. They are more effective if used in conjunction with properties that have applied FireSmart standards.

- The Province of BC owns two types of SPUs that range in size and protection capabilities:

  - Type 1 trailers are 48 feet long and capable of protecting 50 structures or more. The Province of BC has six of these trailers.

  - Type 2 trailers are 22 feet long and capable of protecting up to 50 structures.

- The SPU program is operated and managed jointly by the Office of the Fire Commissioner and the BC Wildfire Service to prioritize the deployment of Type 1 and Type 2 SPUs to wildfires, along with trained structure protection crews and a structure protection specialist.

- Some local and Indigenous governments have purchased and maintain their own structure protection resources to be used when a wildfire becomes an interface fire.

FireSmart® and the FireSmart logo are registered trademarks of Partners in Protection Association (PiP).