BC **Forest Safety** Council
Unsafe is Unacceptable

Facilities Winter Preparedness Checklist

Before Winter Weather Arrives:

General

- ☐ Form an emergency action plan and educate all personnel in its use.
- ☐ Designate a *weather watcher* who will receive and evaluate weather forecasts and place the plan in operation when critical temperature conditions are predicted.
- ☐ Set up priority for steam usage in order to keep critical equipment in use and provide adequate tracing of the systems.
- ☐ Keep standing instructions that the public fire department be notified *immediately* in the event of a fire.
- ☐ Hold a winterization meeting with key personnel, well before cold weather.

Buildings

- ☐ Inspect roofs weekly to ensure they are in good repair. Make sure flashing is secure, coverings are free from tears and blisters, and fastening and ballast is adequate as needed.
- ☐ Keep roof drains clear.
- ☐ Remove accumulations of debris (scrap paper, dust and chips) promptly to prevent clogging of drains or overloading the roof when wetted.
- ☐ Establish an emergency roof snow removal team. Ensure it is well equipped (shovels, blowers, etc.) to remove heavy snow accumulation as it occurs.
- ☐ Look for places where cold winds can blow in. Close up small openings and make necessary repairs.

Equipment

- ☐ Drain idle equipment.
- ☐ Inspect domestic water, compressed air and instrumentation piping for sections that may be exposed to freezing.
- ☐ Heat trace and insulate exposed piping sections that must remain in service over the winter. Piping that need not remain in service (i.e., hose bibs) should be drained and winterized.

Fire Equipment

- ☐ Provide proper heat (at least 4°C) and insulation for valve houses, water tanks, pump houses, etc.
- ☐ Check water temperature (and heating or circulation equipment) of fire protection tanks daily to prevent freezing.

Dry Pipe Sprinkler Systems - Make a list of all dry pipe systems and check them off one by one as follows:

- ☐ Locate and clearly identify low point drains so they can be easily found. A list of low point drains should be posted in each valve house or adjacent to each riser.
- ☐ Check the pitch of piping to be sure any condensed moisture will flow back to low-point drains or the dry-pipe valve. Install additional low point drains if necessary. At the same time, check for and repair broken/damaged pipe hangars that could cause low points.
- ☐ Open low point drains to “blow down” the systems and remove collected moisture.
- ☐ Ensure that the air supply for the sprinkler system's compressor(s) are cold and dry to avoid condensation within piping.
- ☐ Drain condensate traps in plant air systems on a regular basis.
- ☐ Check the integrity of the sprinkler systems to ensure air pressure can be maintained for 24hrs without the use of air maintenance devices of plant air supplies.

Wet Pipe Sprinkler Systems - Make a list of all wet pipe systems and check them off one by one as follows:

- ☐ Ensure that adequate building heat is provided to all areas served by wet pipe sprinkler protection. Special attention should be given to areas near doors, windows, skylights, ventilators and other large openings. Blind spaces, unused attics, stair towers, low spaces under buildings and roof houses are often subject to freezing.

Before Winter Weather Arrives: *(cont. from page 1)*

Antifreeze Systems

- ☐ The freezing point of solutions on antifreeze systems should be checked by measuring the specific gravity with a hydrometer and adjusting the solution if necessary.

Outside (Valves, Hydrants and Yard Main)

- ☐ Check Post Indicator Valves (PIV's) & Hydrants for tightness and repair any leaks.
- ☐ Inspect all non-freeze hydrants to ensure they are completely drained.
- ☐ Ensure all underground mains have proper depth of bury or are adequately insulated. Specifically, check any mains that are located near ditches or in areas recently excavated.

During Freezing Weather

Buildings and Non-Fire Piping Systems

- ☐ Inspect roofs for excessive snow accumulations and employ emergency snow removal as necessary. Pay particular attention where drifting snow can accumulate such as where a lower roof adjoins a higher roof. Caution must be taken to ensure that roof coverings are not damaged.
- ☐ Prevent ponding of water and ice on roofs by clearing drains of ice and snow and clearing paths to drains.
- ☐ Make sure instrumentation and domestic piping remains unfrozen.

Fire Protection

Sprinkler Protection

- ☐ Maintain extra heat during periods of extreme cold, especially during idle periods. Check room temperatures frequently, to ensure temperatures do not drop below 4°C for areas protected by wet pipe systems.
- ☐ Check dry pipe sprinkler systems, check once per shift (or at least daily) for both system air pressure and temperature in the dry-pipe enclosure. If necessary, insulate the enclosure and install a safe portable heater to keep the temperature in the enclosure above the freezing point.
- ☐ Inspect and drain low point drains on dry pipe sprinkler systems at least weekly.
- ☐ Provide heat tracing lines where necessary.
- ☐ Keep all fire protection valves and hydrants visible and accessible by removing snow accumulations.
- ☐ Make drain tests of sprinkler risers wherever practicable to determine if underground mains are frozen. *Open the drain wide, let it run 30 seconds or more, and then shut it off. If the pressure fails to return promptly to normal there may be ice blockage.*
- ☐ If maintenance personnel are not available, be sure guards are trained as to what action should be taken if a sprinkler alarm sounds:
  1. Summon the fire department.
  2. Verify wether or not there is a fire.
  3. Summon the appropriate personnel so the system can be reset immediately.

Underground Main

- ☐ Underground mains which may be exposed to freezing due to a lack of adequate cover may be protected by providing additional cover or by insulation and heat tracing or by establishing flow in the piping by cracking a two inch drain on a sprinkler system. The latter alternative is not a permanent solution; ultimately adequate cover or insulation must be provided when warm weather returns.

If A Fire System Freezes - Give "Top Priority" To Restoring Full Protection

- ☐ Inform management of frozen systems immediately as hazardous operations may need to be curtailed.
- ☐ Determine the extent of freezing. If possible, isolate the portion of the system which is frozen and return the remainder to service. If a small section of a system is frozen, consider removing the frozen piping to a warm area.
- ☐ **Do Not** use a torch or open flame to thaw frozen pipes. Remove frozen piping to a heated area until it has been warmed sufficiently to force the ice from the pipe.
- ☐ Once the piping is clear of ice, examine it for cracked fittings, split pipe and opened or weakened sprinkler heads.
- ☐ Reinstall the pipe with proper pitch. For dry systems, reset the valve and check for air tightness of the system.