

# Tips for Building a Natural Ice Rink in Your Backyard

If you're considering building a natural ice rink, make sure to take all appropriate safety precautions, including wearing proper safety gear such as safety boots, safety glasses, gloves, ice cleats, and a safety helmet. Building a natural rink will use a significant amount of water, so consider the impact this may have on your water bill and/or your water source. Before undertaking any works that may alter drainage on your land, satisfy yourself that your property (its slope, grade, drainage features) will allow for appropriate drainage (i.e. for melting water in the spring) and will not negatively impact your neighbour.

*This document is intended for general knowledge and is not to be considered or relied upon as professional advice for any reason. You should consider seeking professional advice and/or consult your home insurer before taking on this project.*

## BUILDING A NATURAL ICE RINK

### Building the base

1. If there is snow on the ground, pack the snow firmly and evenly throughout the rink. A sturdy base requires 2 inches (5 cm or more) of firmly packed snow. Unpacked snow will result in soft, lumpy ice, collapsing sections and cause rapid melting during warm spells.
2. If snow has not accumulated, wait until the frost is into the ground at least 2 inches and be sure the weather will remain below -4° (24°F) for several days before attempting to complete the first flood. This typically requires 7 to 10 consecutive days of minus 10 degree Celsius or lower.
3. If extra snow is available, create a wall on perimeter of rink, creating a pseudo retaining wall. Be sure there are no gaps in the retaining wall where water can escape and seal any gaps with packed snow.

## MAINTAINING A NATURAL ICE RINK

### Flooding the ice

1. Make sure you are wearing all the proper PPE when building your ice rink, including ice cleats and safety helmet when entering the ice surface.
2. Scrape and clean snow, ice chips, lumps, flakes and dirt before flooding, and remove from the ice surface. The cleaner the ice surface, the smoother the surface when flooding.
3. Start flooding at the furthest point away from the water supply and move across the rink applying light fogs or spray over the entire surface until wet. Never direct the force of the water downward at the ice. Instead, always spray up and outward.
4. Make sure that each layer is frozen before flooding again. The more floods the better to sustain ice during mild periods.
5. Large amounts of water will draw the frost out of the ground, causing the water to soak into the ground which could mean a delay of several days until the ground re-freezes. If

it takes more than 15 minutes to freeze, you have put too much water on and should reduce the amount of the next flooding.

6. On extremely cold nights, - 23° C (-9° F) or lower, it is not advisable to flood an existing good ice surface because the warmer water will cause significant cracking in the ice.
7. Make sure the rink surface is thick enough to withstand the sun exposing patches of earth on milder days.
8. Do not flood from an open hose. Use a nozzle on the end of the hose. Excess water cannot be easily removed thus destroying your efforts. Be careful to not direct water to places you don't want it, like your basement window or a walkway.
9. A frozen hose often takes several hours to thaw, so if possible, keep the hose in a warm area to prevent it from freezing. Don't forget to drain the hose by leaving the nozzle open while rolling the hose to allow water to drain from the end. Never leave a hose running outside, especially into a ditch. The building of ice in a ditch can cause serious flooding during warm spells and cause considerable damage to your property and to your neighbours.
10. Never flood a rink when the temperature is above -4°C (26°F). Water will not freeze quickly enough to create an effective ice surface.
11. During a prolonged mild spell and/or at season's end, please ensure that all water is drained into an appropriate location and the site is made safe returning it to its pre-rink condition.

### **Repairing a crack, chip or hole**

If the ice becomes chipped, cracked or develops a hole, follow these repair instructions:

1. Sweep or clean the hole of snow or ice chips
2. Prepare a slush mixture (snow and water)
3. Pack the slush in the hole
4. Level the slush with a shovel
5. Sprinkle lightly with water
6. Protect this area from skaters until frozen

### **Repairing shell ice**

Shell ice can occur when an air bubble freezes to the ice surface and appears as a white, thin layer of ice that can be easily broken. To repair the shell ice:

1. Break and remove it
2. Follow the instructions for repairing a crack, chip or hole above