



Project Background

In September of 2013, the Vanderhoof Curling Club began renovations and upgrades on their facility. The plan included a new ice plant, as well as a new heating system and concrete floor. When these renovations were complete, the club anticipated that their facilities would be available year round for the use of community members.

The Vanderhoof Curling Club is located in Vanderhoof, BC, the geographical centre of British Columbia. The club hosts weekly league games for both men and women, as well as an annual Bonspiel for the area's top teams. The curling club houses three ice surfaces, each of which is 50' x 150'. On the first floor of the club, you will find a kitchen, washrooms, and a lobby to change into your curling shoes, as well as a mechanical room. The second floor houses additional washrooms, and bar and lounge area.

Quick Facts

- **Location** — Vanderhoof, BC
- **Nordic Model** — W-80
- **Unit Capacity** — 6 Tons
- **Units Installed** — 3
- **Total System Capacity** — 19 Tons
- **Unit Type** — Water-to-water
- **Unit Functionality** — Ice Making
- **Project Size** — 4,600 square foot front end, 3 sheets of curling ice - 50' x 150'
- **Designed By** — Shaper Sheet Metal

Geothermal Advantage

Originally, the Vanderhoof Curling Club met their ice making and heating and cooling needs using a single 18-ton compressor unit, a gas-fired unit for the ice shed, and a gas furnace that heated both floors in the front end. To replace this aging equipment, Maritime Geothermal provided the club with three 6-ton Nordic water-to-water units that produced hot and cold water in 80-gallon buffer tanks. An additional 10-ton unit to heat the ice shed, one 2.5-ton unit heats and cools the first floor and one 3-ton unit heats and cools the second floor.

This design worked even better than expected [...] the ice surface stayed true and straight all season with just a minimal amount of maintenance.

— Malcolm Mcleod



With this reconfiguration of their system, the geothermal heat pumps were able to better regulate temperatures, making the club a more valuable space for the community regardless of the season, all while saving money on utilities. Additionally, the geothermal system minimized the degradation of the ice which had been previously caused by the gas-fired unit heaters for the ice shed, so that multiple floods were no longer required. This provided the Vanderhoof Curling Club with a superior ice surface that was also easier to maintain.



The Result

Not only did the club see a \$13,000 decrease in their annual utility bill, they also saw a reduction in the amount of maintenance they needed to perform on their ice surfaces. After the initial flood, they played a complete season without the need to re-flood the surface. There was also an increase in overall ice quality. Game after game, players were impressed with the 14-second draw times and 6' of curl. To maintain that level of quality prior to their renovations and installation of the geothermal system, a maintenance team would have needed to spend an hour preparing each sheet of ice between draws.

All the positive reviews of the updated facilities quickly made their way around town, as the club reported a 25% membership increase in their men's and ladies' weekly league curling. And for the first time in many years, their Vanderhoof Curling Club annual Bonspiel was a sellout.

For more on how Maritime Geothermal Ltd.'s Nordic® heat pumps can impact your institution, call to **speak with one of our experts** or **find your local dealer** today.