

## Appendix 5

### ST. DAVIDS-QUEENSTON UNITED CHURCH

#### HEATING, COOLING AND THE THERMOSTATS

This appendix will describe the heating and cooling methods for the Church building and Christian Education Hall, how thermostats are programmed and how facility comfort levels are established and maintained. St. Davids-Queenston United Church, for the purpose of heating a cooling, is divided into two facilities:

The Church Building, including the Sanctuary and Lower Level, are heated by hot water radiators that are fed from a boiler system located in the lower level Boiler Room. This heating system is controlled by a programmable thermostat located in the Sanctuary. The Sanctuary is cooled by two ductless heat-pump systems, one located in the balcony at the back of the Sanctuary and the other located in the Choir Loft. The heat pump systems are controlled by handheld programmable thermostat devices located below each unit.

The Christian Education Hall and Kitchen is heated and air-conditioned by a forced-air gas furnace located in the CE Hall Furnace Room, with a connected A/C unit located outside. The heating and air-conditioning are controlled by a programmable thermostat located in the CE Hall. This is a large room with high ceilings and windows facing south, which can present a challenge for heating and cooling especially during high and low outside temperature events.

The Thermostats located in Sanctuary (for heat) and the CE Hall are connected to the Internet through a WiFi connection and can be programmed remotely through this Internet connectivity using a proprietary App. They can also be programmed on-site. The Sanctuary Heat Pump units are in the Choir Loft and Balcony and are controlled by handheld devices. They can also be programmed remotely through the Internet connection. For security and to prevent tampering, the thermostats are locked, and settings cannot be changed without a special code. Members of the Property Committee and Church staff members are provided the code. Users of the facility are not provided this code.

The Thermostat Programming is done weekly, usually on Sunday, based on the schedule of users listed in the Church Calendar for that week. Users of the facilities are therefore encouraged to ensure their facility use is requested using a Facility Request Form and is listed in the monthly Church Calendar to ensure the heating and/or air-conditioning is set up. This schedule can be adjusted based on unforeseen or unplanned needs. Contact the Property Committee Chair as well as the Church Secretary, if you have a change in use or an unplanned activity so that the thermostat programming can be adjusted.

The Handheld Devices for the heat pumps in the Sanctuary can override the programmed comfort levels. Users are requested to show discretion and use the recommended comfort settings described in the Comfort Level paragraph below.

The Comfort Levels are established by the Church Board and as stated in the Facility Use Policy appendix. Every effort is made to meet user comfort needs. When setting the comfort levels, factors like outdoor/indoor temperatures variables, time-of-use hydro rates, natural gas rates are also considered. Users of the facility are not permitted to adjust these levels except as stated above.

Usual Comfort Level Settings:

Heating:	Sanctuary 21° C (70° F) (note: with radiator heat, the room temperature will rise above this setting); CE Hall 21° C (70° F);
Cooling:	CE Hall (Passive Users), 23° C (73.5° F); CE Hall (Active Users), 22° C (72° F); Sanctuary 22° C (72° F) to 23° C (73.5° F)

Note: When the outside air temperature is forecast to be 30° C (86° F) and above, the cooling setting will be no lower than 24° C (75° F).