



## Semiahmoo Society And Foundation



Based in Surrey, this non-profit society provides support for people with disabilities as well as their families. The Semiahmoo House Society is committed to the provision of high quality community-based services for individuals who have a developmental disability. A ground source heat pump system was installed to reduce energy consumption and long-term operating costs.

### **HOW IT WORKS**

Ground source heat pumps convert renewable heat stored below the earth's surface into usable energy. An antifreeze solution circulates through underground piping, picking up the natural heat of the earth, which is then extracted by the heat pump and converted into energy which can be used to heat or cool a building and provide preheated water.

### **CARBON OFFSETS MADE IT HAPPEN**

Without carbon offset funds this facility would have installed a conventional gas and electric heating, ventilation, and air conditioning system. GSHP technology is seldom used for buildings of this size and the project faced significant investment challenges without the presence of offset funds. Today, with their choice of a clean energy system, the Semiahmoo House acts as a model for the shift to a low carbon future.

### **OTHER BENEFITS OF THE INSTALLATION**

The ground-source heat pump system allows the facility to save money on bills while reducing CO<sub>2</sub> emissions and demonstrating leadership in



green buildings and building services. Broader benefits to owners of the facility include lower and more predictable heating bills, since electricity prices do not suffer the same volatility as gas prices. The installation of the GSHP system saves the facility roughly 75% of the operational cost related to conventional approaches to heating and cooling.

#### PROJECT AT A GLANCE

Project Location:	Surrey, BC Canada
Project Type:	Energy Efficiency - Ground - Source Heat Pumps
Standard:	ISO + CDM for Additionality
Credits generated per year:	~17.5 tCO <sub>2</sub> e
Equivalent # of cars removed from the road annually:	~3.3( <a href="#">Based on EPA GHG Equivalency Calculator</a> )
Verifier:	Williams Engineering Canada Inc.
Portfolio:	General
Project Start:	2002
Technical Longevity:	15 to 20 years