

VILLAGE OF SUSSEX CORNER
BYLAW # 95 – 06

GEOHERMAL HEAT EXCHANGE SYSTEMS

Pursuant to Section 7(3) of the *Municipalities Act* of the Province of New Brunswick, the Village of Sussex Corner hereby enacts the following:

1. The purpose of this by-law is to control the use of Geothermal Heat Exchange Systems and in doing so ensure, to the extent possible, the protection of the source(s) of potable water within the Village of Sussex Corner.
2. The following terms are hereby defined for use within this by-law:

“Closed Loop System” means a system designed and installed that circulates a constant concentration of fluid through an enclosed network of piping.

“Geothermal Heat Exchange System” means a system that extracts heat from the ground or body of water through which the piping of the system passes.

“Open Loop System” means a system designed and installed to obtain water from a source (e.g. well, lake), circulate it through the system extracting heat energy and returning the water to the same or another location.

“Village” means the Village of Sussex Corner
3. No person shall be permitted to install and / or operate an Open Loop Geothermal Heat Exchange System within the Village.
4. No person shall be permitted to install and / or operate any form of Geothermal Heat Exchange System on any property located, in whole or in part, within the boundaries of the Village’s Wellfield Protection Designation (Zones A, B, C).
5. Geothermal Heat Exchange Systems, for residential use only, are permitted in the Village, subject to section 3 and 4 above and the provisions listed below:
 - The property owner shall submit a written request to the Village for permission to install and operate a Geothermal Heat Exchange System and subsequently shall provide any and all information necessary to indicate compliance with the by-law;

- The installation of a Village authorized system shall be monitored by an appointed representative of the Village, the cost of which shall be the responsibility of the requestor;
- The fluid contained within the system shall consist of a Village approved concentration of water, propylene glycol and a rust inhibitor, the details of which are included in the Installation / Operation Specification found in Appendix “A”. All other fluids are specifically prohibited;
- The property owner shall grant permission for an appointed representative of the Village to enter onto the property, including the premises, and inspect the system, as and when appropriate, to ensure compliance with the by-law; and
- The installation and operation of a geothermal heat exchange system must conform to the Installation / Operation Specification found in Appendix “A” and the related installation and operation specifications from CSA Standard C448.2-02 shown in Appendix “B”.

6. Any person who fails to comply with the provisions of this by-law commits an offence punishable under Part II of the Provincial Offences Procedure Act as a Category “B” or “C” offence.

7. Upon enactment of this by-law, the following by-laws are repealed:

By-law 32 A By-law To Regulate The Use Of Water Wells For Geothermal Heating And Cooling Systems

By-law 51-98 A By-law Controlling Ground Source Heat Exchange Systems And Associated Wells

By-law 78-02 A By-law To Amend By-law 32

By-law 79-02 A By-law To Amend By-law 51-98

FIRST READING December 6, 2006

SECOND READING December 6, 2006

THIRD READING AND ENACTMENT February 19, 2007

CLERK

MAYOR

**VILLAGE OF SUSSEX CORNER
INSTALLATION / OPERATION SPECIFICATION
GEOTHERMAL HEAT EXCHANGE SYSTEMS**

1. DESCRIPTION:

This specification shall apply to the installation and operation of any Village authorized closed loop residential Geothermal Heat Exchange System.

2. REFERENCE STANDARDS:

All works and materials shall be in accordance with CSA Standard C448.2-02 (latest edition) Design and Installation of Earth Energy Systems for Residential and Other Small Buildings.

The property owner (requestor) and the installation contractor shall be familiar with and abide by the requirements of Village of Sussex Corner By-law # 95-06 Geothermal Heat Exchange Systems, including any appendices.

3. EQUIPMENT AND MATERIALS:

All Geothermal Heat Exchange Systems shall be designed by an experienced, qualified Geothermal Heat Exchange System designer. If requested by the Village, the property owner shall provide evidence of the system designer's experience.

All materials shall be new materials of the best quality suitable for use in the manner intended.

Equipment and materials shall be as specified in CSA C448.2-02 (latest edition).

The pipe zone and backfill material shall be as shown on the attached Drawing GTHP-1 Typical Trench Geothermal Duct.

4. INSTALLATION METHODS:

All Geothermal Heat Exchange Systems shall be installed by an experienced contractor who has expertise in the installation of Geothermal Heat Exchange Systems. If required by the Village, the property owner shall provide evidence of the installation contractor's experience.

4. INSTALLATION METHODS (cont'd):

The depth and layout of underground piping shall conform to CSA 448.2-02 (latest edition) and shall be as designed by the manufacturer of the system.

A layout sketch and related system design data shall be submitted to the Village of Sussex Corner for approval prior to the commencement of any installation activities. The sketch shall provide the depths and horizontal dimensions of all underground components and shall also show distances to all property lines and major obstacles including, but not limited to, adjacent buildings, utility poles, sidewalks, roadways, wells, etc.

5. SYSTEM CONTENT:

The system contents (fluid) shall be a 35% Dowfrost Heat Transfer Fluid as specified in the attached Material Safety Data Sheet.

6. INSPECTION / OBSERVATION:

The Village of Sussex Corner, or its agents or representatives, shall have access to the site at all times during system construction and at such other times as the Village deems necessary to confirm the installation and operation of the system is in accordance with By-law # 95-06 and the Village approved submission.

