

# VILLAGE OF NEW MARYLAND

## BY-LAW NO. 44

### A BY-LAW RESPECTING GEOTHERMAL HEAT PUMPS and FOSSIL FUEL HEATING SYSTEMS

The Council of the Village of New Maryland, under the authority vested in it by Section 7(3) of the *Municipalities Act*, Chapter M-22 R.S.N.B. 1973 and amendments thereto, hereby enacts as follows:

#### **1.0 TITLE**

This By-law may be cited as the Geothermal Heat Pumps By-Law.

#### **2.0 DEFINITIONS**

“Closed Loop Geothermal Heat Pump System” means an enclosed network of piping or tubing installed in the ground and filled with a fluid circulating under pressure;

“Geothermal Heat Pump System” means a system that extracts heat from the ground or water through which the piping of the system passes and includes both a closed loop geothermal heat pump system and an open loop geothermal heat pump system;

“Heating Season” means that season commencing on the first of October in one year and ending on the 30th of April in the next year;

"Open Loop Geothermal Heat Pump System" means a system designed and installed to obtain water from a source and circulate it through the system thereby extracting heat and returning the water to the source or other location;

“Owner” means the owner of property upon which or under which a geothermal heat pump system is located or proposed to be located;

“Person” means any individual, partnership, company, association, corporation or other legally recognized entity and includes the owner of property;

“Village” means the Village of New Maryland.

“Wellfield Protection Area” means any area designated a wellfield protection area by the Province of New Brunswick or the Village of New Maryland.

### **3.0 GEOTHERMAL HEAT PUMP RESTRICTIONS**

- 3(1) Prior to the installation of a geothermal heat pump system as a component of new construction, every owner shall complete, or cause to be completed by his agent, the “Heating System” section of the Village of New Maryland Building Permit application form.
- 3(2) Prior to commencing any retrofit or separate installation of a geothermal heat pump system every owner shall make application for and obtain an installation permit from the Village of New Maryland.
- 3(3) The application referred to in subsection 3(1) and 3(2) shall:
  - (a) include a site plan indicating each proposed geothermal heating system well location and the relative locations of any existing or abandoned wells on the subject property and immediately adjacent properties;
  - (b) include complete and detailed specifications of the proposed geothermal heat pump system; and
  - (c) provide the name and address and telephone number of the owner, contractor, and the system installer(s).
- 3(4) No owner shall install or permit to be installed a geothermal heat pump system, or any components of the vertical or horizontal loop systems, unless installed by a Certified Installer, certified by the Canadian GeoExchange Coalition, or equivalent certification.
- 3(5) No person shall install or permit to be installed a geothermal heat pump system unless it is in compliance with the latest versions of the CSA Standard CAN/CSA-C445-M92, the laws of the Province of New Brunswick and the by-laws of the Village of New Maryland and such additional requirements established by the Village Engineer.
- 3(6) No person shall use an installer of a geothermal heat pump system to install a geothermal heat pump system unless the installer provides a guarantee of their work for a minimum of twelve months following completion.
- 3(7) No person shall install or permit to be installed any open loop geothermal heat pump system within any area of the Village of New Maryland.
- 3(8) No person shall install or permit to be installed a geothermal heat pump system within:
  - (a) a designated wellfield protection area;
  - (b) 90 metres of a storage area for commercial fertilizers or chemicals, an existing or decommissioned landfill site, existing or decommissioned lagoon or waste treatment facility, aboveground or underground storage tank for petroleum

products or chemicals;

- (c) 30 metres of a below-grade manure storage area, cesspool, unplugged abandoned well, subsurface disposal field, grave, building or yard used for livestock or poultry, privy, or other contaminants that may drain into the ground;
  - (d) 15 metres of an existing operating well, septic tank, buried sewer, a pit or unfilled space below ground surface, a sump, except that a geothermal heat pump well may be drilled closer than 15 metres to a basement or another geothermal heat pump well on the subject property; or
  - (e) the minimum setback from an existing or proposed septic tank, sewer line, absorption field or bed, or seepage pit, as follows:
    - i) 15 metres if the well is up-gradient
    - ii) 23 metres if the well is at the same ground level gradient
    - iii) 30 metres if the well is down-gradient.
- 3(9) The vertical heat-transfer wells to be completed and commissioned for the vertical loops of a geothermal heat pump system must be drilled by a contractor licensed for the same by the Department of Environment. Vertical loops must be installed by a licensed installer, and upon completion shall be grouted and sealed to the satisfaction of the Village Engineer.
- 3(10) Any geothermal heat pump system remaining dormant or unused for a period greater than one heating season must be closed and drained by the owner.
- 3(11) Any geothermal heat pump system with unused wells or abandoned heating system wells or abandoned in-ground infrastructure must be decommissioned and grouted sealed by the owner to the satisfaction of the Village Engineer.
- 3(12) The heat-transfer media used in a geothermal heat pump system must consist of a non-toxic fluid approved for use by the Village Engineer, including but not limited to:
- i) water;
  - ii) aqueous solutions of sodium or calcium chloride;
  - iii) food quality propylene glycol;
  - iv) potassium acetate with less than 1% corrosion inhibitors; or
  - v) pure glycerin solution in which glycerin is at least 95% US pharmacopeia grade.

#### **4.0 FOSSIL FUEL HEAT SYSTEMS**

- 4(1) No person shall install or permit to be installed a fossil fuel (oil) heating system within a designated wellfield protection area.
- 4(2) no person shall replace or permit to be replaced a fossil fuel (oil) heating system with an oil heating systems within a wellfield protection area.

#### **5.0 PENALTIES**

- 5(1) Every person who contravenes a provision of this bylaw is guilty of an offence and is liable on summary conviction to a fine of not less than one hundred and forty dollars (\$140.00) and not more than the maximum fine that may be imposed for commission of an offence punishable under Part II of the *Provincial Offences Procedure Act*, S.N.B. 1987, c. P-22.1, as a category D Offence.

Read First Time: 18 April 2007  
(By title)

Read Second Time: 18 April 2007  
(In Its Entirety)

Read Third Time and Enacted: 16 May 2007  
(By Title)

Cynthia Geldart  
CAO / Clerk

Frank Dunn  
Mayor