

3.0 North Tyndal Wellfield Groundwater Protection Strategy

A committee, known as the North Tyndal Wellfield Advisory Committee, was established at the end of the Exploration Program to oversee the actions and issues concerning the land uses in the new North Tyndal Wellfield. It consists of members of Council and staff from both the Town and Municipality, personnel from the Nova Scotia Department of Environment and Labour, as well as two citizen appointees, one from each municipality, with knowledge and interest regarding the water supply. This committee considered both Provincial and Federal regulations, such as the Water Act and the Department of Environment Regulations and Guidelines for Monitoring Public Drinking Water Supplies. From these regulations the Town, in cooperation with the North Tyndal Wellfield Advisory Committee and staff of NS Departments of Environment, Municipal Affairs, Health, Agriculture and Lands and Forest, Cumberland District Planning Commission and Municipality of Cumberland, developed a Groundwater Protection Strategy that pertains specifically to the North Tyndal Wellfield. The main premise for the Groundwater Protection Plan is the definition of protection zones established in accordance with delay times or travel times for groundwater in roughly concentric circles around the pumping wells.

There are three zones of protection:

Zone I - 10 year delay – this is the innermost zone - only activities associated with water production and forest management - 600 hectares.

Zone II - 50 year delay- 1000 hectares

Zone III - Total Recharge - 2100 hectares

There are nine components of the Groundwater Protection Strategy:

1. Designation under the Nova Scotia Environment Act Regulates the following:

- open fires
- forestry operations
- pest control products
- waste disposal
- vehicle usage in Zone I
- pits, mines or quarries, transmission lines
- highway salting and ice control
- agricultural operations

2. Intermunicipal Planning Strategy

This joint strategy, approved by Councils of both the Town of Amherst and Municipality of the County of Cumberland covers only the North Tyndal

Protected Water Area. It contains a number of policies that bind both councils in land use planning. The Municipality of the County of Cumberland have enacted a land use bylaw to regulate land uses in the protected water area.

3. Establishment of a Wellfield Advisory Committee

In early 1992, both Councils agreed to form the "North Tyndal Wellfield Advisory Committee" to advise the two Councils on policy issues.

4. Acquisition of Land

To give the ultimate level of protection to the immediate areas around the production wells, the Town of Amherst owns all of the land in Zone I. This will permit the imposition of the most stringent level of control without restricting the ability of the private landowner to have reasonable use of their land. It is also a Policy of the Town of Amherst to consider the purchase of all private land that comes up for sale in the Wellfield, currently can have purchased over 400 hectares in zones two and three.

5. Long-term Water Quality Monitoring Plan

The purpose of this plan is to establish a database of chemical parameters of both the groundwater and surface water within the recharge area so that any change in water quality can be detected at the earliest possible opportunity. The Town of Amherst has a policy in place that states that weekly bacterial testing be conducted at four separate sites around the Town to ensure that there is no presence of bacteria in the water supply.

6. Wellfield Contingency Plan

This plan makes provisions for a rapid, systematic and effective response to any accidental spill of dangerous goods that may occur within the Protected Water Area. The contingency plan includes information regarding team leader responsibilities, reporting procedures, available resources and operational methods to ensure containment and removal of any spilled containments.

7. Forest Management Plan

Article 6.1 of the regulations under the Water Act requires that any person planning to harvest more than 20 chord of wood from any holding within the Protected Water Area must first have a forest management plan approved by the Wellfield Advisory Committee. The Committee approved a "Terms of Reference for Forest Management Plans" in October 1992 and these are available to any landowner to assist in the development of their plan.

8. Public Education

Signage at each highway entrance as well as around the perimeters of Zone I and III are required to remind citizens of the restrictions imposed. Citizens may notify the Amherst Water Utility for any information regarding same.

9. Enforcement & Administration

- Town staff can write summary offence tickets;
- Provincial Department of Environment and RCMP have jurisdiction;
- Town and County staff have jurisdiction

In 1993 when the Town started production at the North Tyndal Wellfield, our Groundwater Protection Plan was one of the few operating plans in Canada. Since that time, many other municipalities have modelled their own protection plans on the basis of what Amherst was able to accomplish. Our plan is simply designed to protect the water supply from contamination to ensure future generations enjoy a continued supply of pure clean groundwater.