

Clean Water Act of New Brunswick and municipal wellfield protection program

R.A. Brinsmead

*Land and Water Planning Section, New Brunswick Department of the Environment,
P.O. Box 6000, Fredericton, New Brunswick E3B 5H1, Canada*

The Clean Water Act of New Brunswick (1989) provides for the designation as a protected area of any watershed, aquifer or groundwater recharge area that is used as a water source for a public water supply. Within a protected area, the Minister of the Environment may impose prohibitions or controls on any activity, thing, land use or water use that might impair the quality or quantity of water, and may allocate the use of water and promulgate standards to protect water quality and quantity.

The New Brunswick Department of the Environment has recently initiated a Wellfield Protection Program, intended to design protection areas encompassing municipal water wells and wellfields. The process involves the issuance to consultants of a Request for Proposals to prepare a Wellfield Protection Plan and Designation Document. The intention is to conduct studies first on municipalities whose wellfields have been judged to be the most vulnerable to contamination and/or the most costly to replace, and to continue working by order of priority through the

remaining wellfields.

The process is designed to outline "staged" protection areas, with an inner zone where all hazardous land uses are excluded, and one or more additional zones, the outer boundary of which is suggested to be based on the distance of calculated ten-year groundwater travel time to the well(s) under normal operating conditions. The consultant is expected to prepare a map of the wellfield depicting all existing land uses, and past hazardous land uses, and to assess likely future land-use pressures. Annual recharge and annual safe yield of the wellfield are to be estimated, and a list prepared of excluded and conditioned land uses for each zone. The procedure involves preparation of a public information package, and the holdings of a public meeting to describe the progress and solicit input. The consultant is to outline an appropriate program for implementation of the protective measures, recommend procedures and assess associated costs.