

1.0 General Proposal Information

The following section provides the general information concerning the proposed groundwater well system specified in items 2.i to 2.v inclusive and 2.vii of the Environment Act Proposal Form. Subsequent sections provide the technical description of the proposed development and method of operation, the description of potential impacts, the proposed environmental management practices, the proposed schedule, and the funding source. Information on the proposed pipeline and a detailed description of the existing environmental setting can be found in the accompanying reports prepared by Cochrane Engineering Ltd. (December, 2005) and North-South Consultants Inc. (November, 2005), respectively.

1.1 Certificate of Title/Project Location

The proposed groundwater well system will be constructed at the southwest corner of SE22-05-09E on crown lands within the Sandilands Provincial Forest (Figure No. 01). An application for an easement on Crown Land has been made (copy in Appendix A).

The study area for the project includes the groundwater well site and the area within the zone of influence of the well, and the pipeline route and adjoining lands that may be affected by its construction and operation.

1.2 Owner of Mineral Rights

The project is located on crown land held in right of the Province of Manitoba. Information on the owner of mineral rights will be provided if necessary for the review of this development proposal.

1.3 Description of Existing Land Use

The land use at the groundwater well site is forest management within the Sandilands Provincial Forest. A complete description of the environmental setting can be found in the accompanying report prepared by North-South Consultants Inc. The following summary of the existing environment has been excerpted from that report:

The groundwater well site is located adjacent to PR 404, approximately 8 km north of the Town of Sandilands. This location lies within the southwest corner of the Lake of the Woods ecoregion within Canada's Boreal Shield ecozone. At a coarse scale, the ecoregion is underlain by massive, crystalline, Archean bedrock which has formed hummocky, broadly sloping uplands and lowlands.

Soil materials consist of sandy and gravelly outwash and beach deposits, local areas of stony calcareous loam textured glacial till overlain in places by sandy to coarse-loamy textured lacustrine deposits, and extensive areas of shallow to deep organic deposits. The areas soils are classified as Eluviated Brunisols and Gray Luvisols developed on sandy to loamy textured materials, and Dark Gray Chernozems or Luvisols developed on clayey lacustrine sediments. The poorly drained sites associated with these soils are classified as Humic Gleysols and peaty phases of Gleysolic soils. Organic soils developed on forest, sphagnum or fen peat are dominant in the low-lying terrain surrounding the Bedford Hills.

The Bedford Hills are a prominent physiographic feature in this area. The upland rises nearly 90 metres above the lower-lying terrain of the Whitemouth Lake Lowland to the east and the

Southeastern Plain to the west, to an elevation of 390 metres asl. The hills are a gently sloping to hummocky area with local relief under 3 metres and a slope averaging 2-5 percent.

Surface drainage varies from very poor to well-drained. In the immediate area of the well site, surface drainage is well- to rapidly-drained, owing to the coarsely textured sands and gravels associated with the Bedford Ridge. Drainage has been improved in places, including the Watson P. Davidson Wildlife Management Area, by man-made drains constructed to enhance runoff and reduce the duration of surface ponding.

Land use consists primarily of forestry, except where other primary uses or legislative protection has been designated. Merchantable forest on well- to poorly-drained mineral soils and on many of the organic soils is utilized by the forestry industry. These areas also provide habitat for wildlife and are extensively used for recreational purposes. Land use for agriculture, especially east of the Bedford Ridge, is minimal. The majority of soils have moderately severe to very severe limitations for arable agriculture. The sandy soils require careful management to protect against the risk of wind erosion and to maintain productivity, and soils with extremely stony and cobbly surface conditions require stone clearing to permit annual cultivation. There are also areas of low relief dominated by organic soils with imperfectly- to poorly-drained soils whose seasonally high water tables are subject to surface ponding in the spring or following heavy rains.

Terrestrial vegetation is typically a wooded succession of trembling aspen, paper birch, jack pine to white spruce, black spruce and balsam fir. Cooler and wetter sites support a white cedar, black spruce and tamarack succession state. The region is interspersed with numerous wetlands, most of which are peat accumulating forms such as bogs and fens. Characteristic wildlife includes moose, black bear, wolf, lynx, snowshoe hare and woodchuck. Bird species include ruffed grouse, hooded merganser, pileated woodpecker, bald eagle, turkey vulture, herring gull and waterfowl.

1.4 Land Use Designation

The well site is located within the Sandilands Provincial Forest. This forest area has been set aside to provide timber reserves and is managed on a sustainable yield basis by calculating the Annual Allowable Cut for an area. Other land uses are allowed within the Provincial Forest provided they do not affect the ability to regenerate the forest between timber harvests.

1.5 Previous Studies

Information regarding the development of the project concept and the alternative methods of achieving the project objectives can be found in the report Pembina Valley Water Cooperative Inc Supplemental Groundwater Supply System Evaluation prepared by UMA Engineering Ltd. (March 2005). The report includes a description of the potential alternative sources of water and the rationale for selecting the location included in this proposal. Since the project objective was to provide a safe and secure water supply, the do nothing option was not considered as this would not address the concerns associated with water shortages during periods of drought or contamination due to accidental spills. The alternatives assessed included various potential sources of water and alternative pipeline routes.

1.6 Storage of Gasoline and Associated Products

The operation and maintenance of the facilities will not involve the storage of any gasoline or associated products. During construction, small amounts of fuel may be stored on-site for construction vehicles. Fuel storage will be required to comply with the Manitoba Environment Act regulations and guidelines respecting the use and storage of gasoline (Storage and Handling of Petroleum Products and Allied Products Regulation 188/2001).