

Executive Summary

The study area is located to the east and to the south of the City of Grande Prairie and consists of 43 sections of land. The land of the study area has a gentle slope toward the southeast. The existing developments scatter throughout the entire study area.

Two wastewater system options were investigated to service the study area. These options were a gravity sewer system with lift stations and a low pressure sewer system with lift stations. For the water distribution systems, the options that were investigated included a standard water distribution system and a trickle water distribution system. All proposed systems were designed on the basis of an ultimate development scenario within the servicing areas and on the assumption that all lands having an agricultural land use be developed into Country Residential subdivisions. The conversion of existing Country Residential Subdivisions into Rural Residential subdivisions were not considered in the design of these systems.

The study concluded that the most cost-effective wastewater system and water distribution system is the low pressure sewer system and the trickle system, respectively. The estimated construction costs for these systems are as follows:

- Low pressure sewer system for the entire study area \$ 10,470,232
- Trickle water system for the southern area \$ 7,943,000

These systems can be implemented in stages in accordance with requirements of existing and future developments.

The study recommended that a low-pressure sewer system and trickle water distribution system be implemented for the study area. Also, a geotechnical investigation and engineering survey shall be carried out for the preliminary and detail design.