

Evaluation of Alternative Technologies

Prior to commencing the VA Workshop, technical information requests were sent to more than 60 water and wastewater technology vendors asking for up-to-date data on proprietary systems that could satisfy the servicing needs of the study area. In general, these were grouped into three categories for water and wastewater systems, including individual or private, on-site systems; cluster systems and centralized systems. This technical information allowed the VA experts to fully understand the advantages and limitations of each, and determine their applicability to physical conditions specific to the Lakeshore area

During the workshop, the VA Team identified and evaluated over 170 servicing ideas and creative possibilities. Some water and wastewater alternatives examined are listed below. A comprehensive summary of technologies and creative ideas considered at the VA workshop is attached as Appendix A.

- Solar aquatic systems
- Low water consumption fixtures and appliances
- Chemically assisted filtration systems
- UV disinfection
- Reverse osmosis
- Sand/media filters
- Wetlands
- Vacuum collection systems
- Low pressure sewers
- Expanding the private water system
- Various forms of on-site private treatment
- Localized treatment facilities
- Sewage lagoons
- Biological treatment systems
- Effluent disinfection processes
- Low pressure, steady flow water system
- Bioreactor systems
- Home-based treatment systems

While some options could involve capital cost savings, the VA Team eliminated most technical alternatives for one or more of the following reasons:

- Building Code provisions, Public Health Department requirements and Ministry of the Environment policies could not easily be satisfied
- Systems were not compatible with local geological, hydrogeological and land use characteristics
- Potential for adverse water quality would be outside municipal control
- Annual operating and maintenance costs would be substantially greater than the equivalent cost of the modified baseline system.
- Potentially high annual costs being passed on to the residents through user charges.
- Potential for adverse water quality would be outside municipal control