

## Pine Springs Site Compared to Waterloo Biofilter Treatment System

### Municipal Class EA - Part C Municipal Wastewater Projects

Source: 1993 Class EA for Municipal Water and Wastewater Projects

Typical Effects on the Environment caused by construction activities

\* likely positive or negative effect

	Waterloo Biofilter	Pine Springs Site
<b>AESTHETICS</b>		
removal of vegetation or landscape features	*	negative impact - removal of vegetation
change of compatibility with landscape residents, non-residents, recreationalists and tourists exposed to new view	*	negative impact - will work with existing landscape
	*	negative - minimal - far enough way for existing residents that exposure would be minimal
<b>CLIMATIC EFFECTS</b>		
vegetation removal or snow accumulation, wind screening and shade on adjacent buildings and activities	*	negative - minimal - will have to remove some vegetation however adjacent building and activities are far enough away there should be no impact
change in air quality		negative - moderate - possible odours
<b>ECONOMIC AND SOCIAL EFFECTS</b>		
change to tax base	*	negative - potential increase in taxes. Moderate capital costs approx. \$ 350 K
change in employment opportunities	*	positive - possibility of an employment opportunity
change in tax rate or cost of service	*	negative - potential to increase taxes or to charge for service
<b>GROUNDWATER</b>		
change in quality		none - effluent is of good quality
interference with flows or levels		none - will no interfere with groundwater flows or levels
<b>HERITAGE RESOURCES</b>		
disruption and/or destruction of sites, cultural heritage landscapes and structures having archaeological, historical, architectural or cultural/heritage significance	*	negative - potential to disrupt a natural heritage wetland area
<b>PUBLIC HEALTH</b>		
effects on quality of life e.g. decreased sewage back-up	*	positive - peace of mind
<b>NOISE &amp; VIBRATION</b>		
changes in existing noise and vibration levels	*	negative - minimal during construction
<b>RESIDENTIAL, COMMERCIAL, INDUSTRIAL, INSTITUTIONAL</b>		
temporary disruption during construction nuisance odours	*	negative - minimal - possible industrial impact during construction negative - potential for odours
<b>SOIL AND GEOLOGY</b>		
erosion or compaction during construction	*	negative - soil will be compacted during construction activities
contamination of soils	*	negative - possibility of soil contamination i.e. spills
mixing of topsoil with subsoil	*	negative - possibility of mixing of soils
scarring of unique landforms	*	negative - possibility to disturb significant wetland
<b>SURFACE DRAINAGE</b>		
increased surface runoff		none - surface water runoff is not expected to increase
decreased surface water drainage		none - surface water drainage is not expected to decrease
<b>TERRESTRIAL VEGETATION AND WILDLIFE</b>		
mortality/stress of vegetation due to sediment deposition, construction equipment movement or changes in soil moisture conditions resulting in reduction and/or deterioration of wildlife habitat	*	negative - high - vegetation will be impacted due to construction. minimal impact due to increased soil moisture
changes in vegetative composition as a result of environmental changes	*	negative - moderate - vegetation will be removed resulting in the reduction of wildlife habitat. Do not need to remove as large of land area
removal or disturbance of significant trees and/or ground flora	*	none - no changes in vegetative composition negative - moderate - trees and/or ground flora will have to be removed - land requirements for treatment is 1.5 ha and 0.5 ha for disposal
new or increased exposure of trees leading to increased loss of habitat for wildlife	*	negative - moderate - new areas of trees will be exposed leading to loss of habitat
effect on wildlife habitat	*	negative - high - some habitat will be lost
effect of contaminants on vegetation and wildlife		none - only contamination on site would result form spills which should be leaned and may act as fertilizer
<b>UTILITIES</b>		
effects on other utilities e.g. relocations	*	negative - would have to bring in hydro to site - cost approx. \$ 100 k