

Waterloo Biofilter

Site	Primary Treatment Required	Land Requm'ts	Disposal Area Bed Land Requirements	Total Land Required	Hydro Requm't	Sludge Requm't	Operational Requm'ts	Maintenance	Annual Operation and Maintenance Costs	Optional	Security Required	Budget Cost	Water Quality
Maple Lake	Yes - new septic tank sized to provide >2 days retention time (>73,000 L) equipped with Zabel A300 effluent filters (1/32" filtration) and a balance tank sized to accommodate >0.5 day retention time (>18,250 L) and Monarch Submersible Pumps	~ 0.5 ha for treatment system	0.075 ha for the stone bed and 0.2205 ha for the underlying sand bed	0.7205 ha	Yes	Sludge will accumulate in bottom of septic tank - will need to be removed on a scheduled basis -estimated costs will depend on amount generated and location of disposal (land applied in landfill or Municipal Sludge treatment facility)	Daily inspections Full time staff may be needed, depending on transfer station option	Maintenance includes periodic inspection of the pumps and floats, and cleaning of the spray nozzles and effluent filters	\$10,000-\$15,000 - sampling costs	A remote monitoring system could be installed for remote monitoring of the sewage treatment plant operations. This system integrates data acquisition and historical logging, alarm generation, and control capabilities. The system typically monitors pump on-times, pump cycles, flow rates, temperatures, pump tank levels, and alarms.	Yes - fencing etc.	250,000.00	good
Pine Springs	Yes - new septic tank sized to provide >2 days retention time (>73,000 L) equipped with Zabel A300 effluent filters (1/32" filtration) and a balance tank sized to accommodate >0.5 day retention time (>18,250 L) and Monarch Submersible Pumps	~ 0.5 ha for treatment system	0.075 ha for the stone bed and 0.2205 ha for the underlying sand bed	0.7205 ha	Yes	Sludge will accumulate in bottom of septic tank - will need to be removed on a scheduled basis -estimated costs will depend on amount generated and location of disposal (land applied in landfill or Municipal Sludge treatment facility)	Daily inspections Full time staff may be needed, depending on transfer station option	Maintenance includes periodic inspection of the pumps and floats, and cleaning of the spray nozzles and effluent filters	\$10,000-\$15,000 sampling costs	A remote monitoring system could be installed for remote monitoring of the sewage treatment plant operations. This system integrates data acquisition and historical logging, alarm generation, and control capabilities. The system typically monitors pump on-times, pump cycles, flow rates, temperatures, pump tank levels, and alarms.	Yes - fencing etc.	250,000.00	good