



2/28/2024

Comparison of Sewer System Alternatives					
System	Capital Cost ¹	First Year O&M ²	30-Year Lifecycle Cost	Advantages	Disadvantages
STEP / MBR	\$ 24,550,000	\$ 207,500	\$ 34,422,000	<ul style="list-style-type: none"> *Good for tight construction conditions *WWTP Secondary Treatment Only = +/- \$2M Cheaper *Simple Pump Design *320 Gallon Storage during power outage *Force Mains need only 5' of cover 	<ul style="list-style-type: none"> *Connection to home electrical power required (+/- \$1.50/month) *STEP Tank takes up space on property (10'x10')
Vacuum / SBR	\$ 31,400,000	\$ 262,000	\$ 43,865,000	<ul style="list-style-type: none"> *No Power required from homeowner *Force Mains need only 5' of cover *Optimal in tight construction conditions 	<ul style="list-style-type: none"> *Vacuum takes up space on property (5'X5') *Limited elevation change tolerance (30' max) *Multiple properties required for Vacuum Stations *Primary Treatment at WWTP Required *Individual Vacuum valve failure can result in widespread loss of service (Paging system required) *O&M is costly *Excessive flushing of force mains is often required
Grinder / SBR	\$ 31,500,000	\$ 293,000	\$ 45,440,000	<ul style="list-style-type: none"> *Force Mains need only 5' of cover *Optimal in tight construction conditions 	<ul style="list-style-type: none"> *Connection to home electrical power required (+/- \$3.00/month) *Grinder takes up space on property (5'X5') *Primary Treatment at WWTP Required *O&M is costly, specifically pumps *Excessive flushing of force mains is often required
Gravity / SBR	\$ 35,900,000	\$ 158,000	\$ 43,417,000	<ul style="list-style-type: none"> *No Power required from homeowner *No tanks on property *Cheapest O&M *Service not impacted by power outage 	<ul style="list-style-type: none"> *Multiple properties required for Pump Stations *Sewers can get excessively deep (8' - 14') *Difficult construction in tight areas *Primary Treatment at WWTP Required *Most expensive alternative to construct due to bedrock, soil, and water conditions *Inflow and Infiltration into collection system must be considered

¹ Entire construction costs are assumed to be borrowed at an interest rate of 0%

² O&M costs are assumed to increase at 3% per year to account for inflation