

Town of Westford
Community Wastewater Disposal System
Opinion of Probable Annual Operation & Maintenance Costs
8/18/2023

Cost Category	Annual O&M Cost (2023 US\$)	Annual O&M Cost (2026 US\$)
Contract Operations	\$40,000	\$46,300
Analytical Lab (analysis of effluent samples if required)	\$500	\$600
Electrical	\$4,600	\$5,300
Telephone/Internet	\$3,000	\$3,500
Software/controls upgrades	\$500	\$600
Septage Pumping	\$6,500	\$7,500
Annual IDP Engineering Inspection & Report	\$6,100	\$7,100
IDP Annual Operating Fee	\$1,023	\$1,023
Capital Replacement	\$4,500	\$5,200
Insurance	\$500	\$600
Mowing/Plowing	\$800	\$900
Misc. Repairs	\$2,000	\$2,300
Administration/Billing/Communications	\$3,600	\$4,200
TOTAL	\$73,623	\$85,123

The estimate is based on PRELIMINARY phase estimates for O&M Costs. The estimate is based on scenarios developed by Stone Environmental (Stone). Stone bears no responsibility for prices and quantities noted in the estimate, beyond the preliminary phase. The costs will likely vary based on the actual design, site conditions. Each connected property pays electrical cost for STEP pumps at individual connections. Costs rounded to nearest \$100 except IDP operating fee, which is not annually adjusted. Inflation assumed at 5% annually.

Cost basis and assumptions:

Contract Operations services include routine weekly visits, effluent sampling and sample delivery to analytical lab per permit, 2-3 days onsite for annual engineering inspection, monitoring SCADA or remotely telemetered components, submitting monthly flow data to IDP as required by permit (\$2,800-\$3,200/month). Operator coverage for emergencies and construction or repair projects estimated average \$4,000/year.

Analytical Lab assumes effluent grab samples if required by permit. Assumed required 3x/year for BOD, TSS, pH, chloride, TKN, nitrate-N, total P. Assume Endyne, Inc. of Williston VT provides analysis with reporting to Town and Engineer.

Electrical cost for control building, pump station, drip disposal dosing. Estimated based on Green Mountain Power (<https://greenmountainpower.com/rates/>) Rate 6 General Service, \$06.55/day + \$0.18336/kwh; pump is estimated Duplex 3hp, 3ph, 208/230/460v suction lift pumps. Rough electrical use assumption of 1,000 kwh/month applied.

Telephone/Internet assumes cellular connectivity not feasible and DSL internet connection required for SCADA/telemetry at control building. May include SCADA controls, datalogging, alarms. Estimated \$250/month pending determination of SCADA/telemetry platform and costs in future design phase.

Software/controls upgrades roughly estimated pending determination of system and specifications in future design phase.

Septage pumping costs assumed at 20% of individual STEP tanks pumped each year at 1-2,000 gallons; 50% of dosing tank volume (10,000 gallons) pumped every 3 years. Roughly 8,100 gallons pumped per year. Assume \$500/1,000 gallons.

IDP Annual Operating Fee calculated based on fee document, assumed not subject to inflation:
<https://dec.vermont.gov/sites/dec/files/dwgwp/fees/pdf/feesindirectdischargeprogram.2017.06.13.pdf>

Capital Replacement assumed to accrue at \$4,500 / year; actual amount subject to Selectboard adjustment and approval.

Insurance estimate is based on costs for similar projects; pricing TBD as design advances.

Mowing/Plowing - mowing conservatively assumed twice per growing season in disposal zones at \$150 ea. Plowing assumed completed by private operator at \$500/season.

Misc. Repairs approximately estimated, to be refined as design proceeds.

Administration/Billing/Communications assumed at 2 hours/week at \$35/hr.