

Approximate Cost to Operate Per Month

<b>Standard Septic System</b>		Cost per unit	Life Expectancy or Frequency in years	Annual Cost	Monthly Cost
Septic Tank and Installation (1)		\$3,500.00	60	\$58	\$5
Drainfield Installation		\$3,500.00	20	\$175	\$15
Pumpout & Filter Maintenance (every 3 yrs)		\$200.00	3	\$67	\$6
Electricity to pump water to move sewage from house (3)				\$12	\$1
Initial installation cost		\$7,000.00	<b>Total</b>	<b>\$312</b>	<b>\$26</b>
<p>This represents the estimated cost to properly operate a standard (gravity) septic system. Electricity cost is included because around 37% of water pumped from your well is used to transport sewage inside the home and to the septic tank. Wastewater recharging groundwater contains elevated nitrate.</p>					
<b>Standard Septic System w/Maintenance District</b>		Cost per unit	Life Expectancy or Frequency in years	Annual Cost	Monthly Cost
Septic Tank and Installation (1)		\$3,500.00	60	\$58	\$5
Drainfield Installation		\$3,500.00	20	\$175	\$15
Pumpout & Filter Maintenance (every 3 yrs)		\$200.00	3	\$67	\$6
Annual Operating Permit (6)		\$25.00	1	\$25	\$2
Electricity to pump water to move sewage from house (3)				\$12	\$1
Initial installation cost		\$7,000.00	<b>Total</b>	<b>\$337</b>	<b>\$28</b>
<p>This represents the estimated cost to properly operate a standard (gravity) septic system. Electricity cost is included because around 37% of water pumped from your well is used to transport sewage inside the home and to the septic tank. Wastewater recharging groundwater contains elevated nitrate.</p>					
<b>Unmaintained Septic System</b>		Cost per unit	Life Expectancy or Frequency in years	Annual Cost	Monthly Cost
Septic Tank and Installation		\$3,500.00	60	\$58	\$5
Drainfield Installation		\$3,500.00	10	\$350	\$29
Pumpout and Filter Maintenance		\$200.00	10	\$20	\$2
Electricity to pump water to move sewage from house (3)				\$12	\$1
Initial installation cost		\$7,000.00	<b>Total</b>	<b>\$440</b>	<b>\$37</b>
<p>This represents the estimated cost to operate a standard (gravity) septic system without maintenance. Drainfield life expectancy is reduced to 10 years and one pumpout is expected when the drainfield fails. Wastewater recharging GW has elevated nitrate and possibly pathogenic organisms; sewage effluent may be exposed at ground surface.</p>					

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<b>Level 2 Wastewater System</b>		Cost per unit	Life Expectancy or Frequency in years	Annual Cost	Monthly Cost
Tank/Treatment System w/Installation (2)		\$15,200.00	60	\$253	\$21
Drainfield Installation		\$1,800.00	40	\$45	\$4
Annual Contract for Maintenance (4)		\$650.00	1	\$650	\$54
Electricity for recirc pumps (3)				\$12	\$1
Electricity to pump water to move sewage from house (3)				\$12	\$1
Initial installation cost (4)		\$17,000.00	<b>Total</b>	<b>\$972</b>	<b>\$81</b>
<p>This represents the estimated cost to operate a Level 2 on-site system. Drainfield life expectancy is extended due to reduced organic loading. Pumpout costs are included in annual maintenance fee. Electricity costs are increased because liquid is pumped from the tank to the filter media and again to the drainfield. Wastewater recharging GW is better than standard septic but lower than municipal.</p>		<p><i>monthly cost during first 2 yrs while maintenance contract is covered by initial purchase price</i></p>		<p><b>\$27</b></p>	
<p>May allow higher density development or installations where background nitrate already elevated. Drainfield area may be reduced.</p>					
<b>Municipal Wastewater</b>		Cost per unit	Life Expectancy or Frequency in years	Annual Cost	Monthly Cost
Typical monthly residential fee (Helena)		\$20.00		\$240	\$20
Portion of water bill (37% of \$18 average bill)		\$6.00		\$72	\$6
Install sewer service (house to main)		\$1,500.00	60	\$25	\$2
Service connection fee (5)		\$1,500.00	60	\$25	\$2
			<b>Total</b>	<b>\$362</b>	<b>\$30</b>
<p>This represents the estimated average monthly cost to dispose of wastewater into the municipal system. A portion of the water bill is included because around 30%-40% of your water is used to move waste inside the home. Wastewater quality discharged is higher than typical on-site systems and is subject to performance standards.</p>					

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- (1) Concrete tank life expectancy ranges from 40 to indefinitely, 60 years was used here as an average. Cost to install estimate used here is at high end of range of \$4000-\$7000.
- (2) Assume Advantex or Eliminite. Life expectancy is not proven- used concrete tank expectancy. Maintained under contract. Cost to install range is estimated as \$10-17000 depending on size of household, location in Montana, and other factors. Package prices for septic tank, Eliminite system, pumps, controls, 2-year O&M contract, delivered to the jobsite, set in a pre-dug hole, plumbed, and wired within 25' of the tank are around \$10,000 (4/08). This would be for up to a four-bedroom residence. There may be additional charges of excavation and backfill.
- (3) 8.57 cents/KwH for residential electricity in Montana showed an estimated cost of about \$1.00 per month for a standard Eliminite system taking both pumps and control panel into account and assuming 400 GPD wastewater flow.
- (4) Two year maintenance agreement included in initial purchase price so this amount can be eliminated as a monthly cost during the first two years.
- (5) Varies widely around Montana.
- (6) County program to educate septic owners, requires evidence of maintenance to renew permit.

This comparison compiled by Joe Meek at the Montana Department of Environmental Quality based on data available in May 2008. It is a rough comparison and should be modified with more accurate regional cost information where available. Costs are a simple straight line estimate without correction for future value.