

Water cost analysis

<i>Assumptions</i>	<i>Conventional Trucked Water Delivery</i>	<i>Healthy House System existing water tanks</i>	<i>Healthy House System Communal water</i>	<i>Notes</i>
Number of Buildings served	9	9	9	Apex Houses, Nanook School, Womens Shelter, Municipal Buildings and nearby houses.
Water deliveries per year	3351	1675.5	110.1	Individual tanks vs. One delivery for all homes with full truckload
Sewage pickups per year	3285	0	0	On site disposal of excess Healthy House Water
Litres delivered per year	2202091	1101045.5	1101045.5	Recycled water used in toilets - 50% recycled total
Litres per delivery	657.14	657.14	10000	Assumed average
Truck time per delivery (min)	1.395	1.395	16.67	Calculated as per Municipality of Iqaluit Water and Sewer Study Part 2: Trucked Water & Sewer Delivery Efficiency
Truck time per pickup (min)	1.395	0	0	- as per study
Filling time at source (min)	6.56	6.56	9.33	- as per study
Travel time - water (min)	7.79	7.79	7.79	- as per study
Disposal time (min)	5.29	0	0	- as per study
Travel time - sewage (min)	10.76			- as per study
Attributed water pickups per year	259	129.5	110.1	- as per study
Attributed sewage disposal per year	259	0	0	- as per study
Water truck time per year in minutes	8390.12	4195.06	3719.93	- as per study
Sewage truck time per year in minutes	8738.58			- as per study
Add for efficiency of labor at 67%	8564.35	2097.53	1859.97	- as per study
Add for system efficiency at 85%	4534.07	1110.46	984.69	- as per study
Total truck time per year in minutes	30227.13	7403.05	6564.59	- as per study
Converted to hours	503.79	123.38	109.41	Truck time
Extended @\$75	\$37,783.91	\$9,253.81		For Truck, driver & helper
Extended @ \$60			\$6,564.59	Truck & Driver only
Add cost of Water @ 0.004 per litre	\$8,808.36	\$4,404.18	\$4,404.18	Allowance for treatment plant and fill station
Add cost of sewage treatment @0.002	\$4,404.18			Allowance for treatment plant and dumping station
Total costs	\$50,996.45	\$13,657.99	\$10,968.77	
Cost per litre - delivered water	0.0232	0.0124	0.0100	Does not include Healthy House System operating and capital costs