

Rain Water Harvesting

💧 Rainfall/Useage Budget Calculation

Annual Rainfall Collection Calculation

Calgary's Annual Rainfall	326	mm	(A)
Primary Catchment Area (e.g. house)		m ²	(B)
Secondary Catchment Area (e.g. garage)		m ²	(B)
Maximun Rainwater Collection (A x B)		litres	(C)
Adjustment For Losses (C x .8)		litres	

Water Useage

Number Of Adults In Household		people	(D)
Yearly Outdoor Water Useage	10,183	litres per person	(E)
Annual Outdoor Water Useage		litres	

Water Budget

Over Or Under?			
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Resources



Worksheet - Residential water consumption per household activity

Activity	A daily (L/person)	Col A x no. of Persons	B weekly (L/person)	Col B x no. of Persons	C monthly (L/person)	Col C x no. of Persons	D yearly (L/person)	Col D x no. of Persons
Shower	33.9		237.3		1,017.0		12,373.5	
Baths	7.1		49.7		213.0		2,591.5	
Faucets	30.2		211.4		906.0		11,023	
Dishwasher	30.0		21.0		90.0		1,095.0	
Laundry	46.7		326.9		1,401.0		17,045.5	
Toilets	41.3		289.1		1,239.0		15,074.5	
Leaks & Other	33.2		232.4		996.0		12,118.0	
Outdoor	27.9		195.3		837.0		10,183.5	

Source: Adapted from City of Guelph, Water Conservation and Efficiency Strategy Update. Final Report. Pg 66.



Approximate wetting factors and collection efficiencies for various roof surfaces

Roof Catchment Material	Initial Wetting Factor (mm)	Collection Efficiencies (%)
Metal Roof	0.25	80
Asphalt Shingle Roof	0.5	80
Fiberglass Roof	0.5	80
Asphalt Built-Up Flat Roof	1.5	80
Rubber Flat Roof	1.5	80
Wood Shingles	Varies	Assume 80
Clay Tiles	Varies	Assume 80

Rainwater Harvesting Guidelines: SAIT & City Of Calgary

[Link to Article](#)

Collecting and using Rainwater at Home – CMHC

[Link to Article](#)

Find Lot Size

www.findlotsize.com

Rain Gardens

[Link to Article](#)

Yard Smart Brochures – City of Calgary

[Link to Article](#)

CANARM (Canadian Association of Rainwater Management)

<http://canarm.org>

ARCSA (American Rainwater Catchment Systems Association)

<http://www.arcsa.org>

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